048: 2023

CEB
SPECIFICATION

FEEDER PILLARS & MINI FEEDER PILLARS

CEB Approved Specification
23/01/2024
Chairman Dist. Coordination Committee

CEYLON ELECTRICITY BOARD
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CONTENTS

SPECIFICATION FOR FEEDER PILLARS & MINI-FEEDER PILLARS

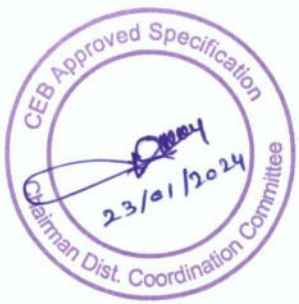
1.0 SCOPE

Feeder Pillars are of 3 basic types, i.e., Mini Feeder Pillar with Fuse, 6 ways Feeder Pillar, and 8 ways Feeder Pillar. This specification covers design, manufacture and testing of various types of feeder pillars comprising of the below two components suitable for use in the CEB low voltage underground cable network.

a) Shell – This is the steel/fiberglass cubicle which covers the equipment inside while bearing the solidly fixed components such as bus bars, terminations, separators etc.
b) Bays – These are the components such as bus bar leads, fuse bases, fuses with covers etc.

The required type of feeder pillar shall be prescribed in the **Schedule of Prices**, by the procurement entity.

2.0 SYSTEM PARAMETERS



(a)	Nominal voltage (U)	400 V
(b)	System highest voltage (Um)	440 V
(c)	System frequency	50 Hz
(d)	Method of earthing	Effectively earthed
(e)	System fault level	25 kA

3.0 SERVICE CONDITIONS

(a)	Annual average ambient temperature	30 °C
(b)	Maximum ambient temperature	40 °C
(c)	Average Ground Temperature	30 °C
(d)	Maximum relative humidity	90%
(e)	Solar Radiation	4.5 kWh/m^2/day
(f)	Environmental conditions	Humid tropical climate with heavily polluted atmosphere
(g)	Operational altitude	From M.S.L. to 1900 m above M.S.L.
(h)	Isokeraunic (Thunder days) level	100 days

4.0 APPLICABLE STANDARDS

The equipment and components supplied shall be in accordance with the latest editions of the standards specified below and amendments thereof.

(a)	IEC 60071-1:2019	Insulation co-ordination - Part 1: Definitions, principles and rules
(b)	IEC 60071-2:2018	Insulation co-ordination - Part 2: Application guidelines
(c)	IEC 61439-3:2012	Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO)

(d)	IEC 61439-5:2014	Low-voltage switchgear and controlgear assemblies - Part 5: Assemblies for power distribution in public networks
(e)	IEC 60114:1959	Recommendation for heat-treated aluminium alloy busbar material of the aluminium-magnesium-silicon type
(f)	IEC 60999-2:2003	Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 2: Particular requirements for clamping units for conductors above 35 mm^2 up to 300 mm^2 (included)
(g)	IEC 61545:1996	Connecting devices - Devices for the connection of aluminium conductors in clamping units of any material and copper conductors in aluminium bodied clamping units
(h)	IEC 60529:2001	Degrees of protection provided by enclosures

The equipment specified shall be used with the **cables** manufactured to the followed standards.

(a)	BS 6622:2007	Electric cables. Armoured cables with thermosetting insulation for rated voltages from 3.8/6.6 kV to 19/33 kV. Requirements and test methods
(b)	BS 6480:1988	Specification for Impregnated paper-insulated lead or lead alloy sheathed electric cables of rated voltages up to and including 33 000 V
(c)	BS 6346:1997	Electric cables. PVC insulated, armoured cables for voltages of 600/1000 V and 1900/3300 V

In addition to the above standards, in case of fiberglass feeder pillars following standards shall be taken into consideration during the construction of cubical.

I. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations
II. UL 94 - Tests for Flammability of Plastic Materials for Parts in Devices and Appliances
III. CSA Std 22.2 No. 94 – Special Purpose Enclosures

However in the event of discrepancy, details given in this CEB specification supersede above standards.

5.0 BASIC FEATURES

5.1. Design and Construction

Design and construction of the Feeder Pillars should be as per the attached drawings. Relevant drawing numbers for each type of Feeder Pillars are given below.

Feeder Pillar Type	Drawing Numbers
Mini Feeder Pillar with Fuse (Steel or Fiberglass)	DS&S/2023/048/A1 to DS&S/2023/048/A6
Feeder Pillar – 6 Ways (Steel or Fiberglass)	DS&S/2023/048/B1 to DS&S/2023/048/B9
Feeder Pillar – 8 Ways (Steel or Fiberglass)	DS&S/2023/048/C1 to DS&S/2023/048/C9

In case of fiberglass feeder pillars hot compression molded fiberglass reinforced polyester material shall be used for cubical.

5.1.1. General

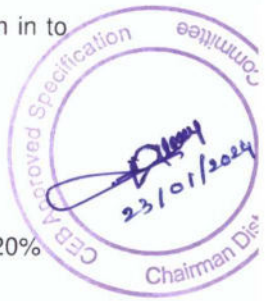
The equipment should be self-standing, outdoor, whether proof, and long life, substantially robust and safe enough to be used in populous areas. The equipment should be able to incorporate cables and end terminations of different type, sizes and makes.

5.1.2. Design

Adequate consideration should be given in the design of feeder pillar and its components to the following.

(a) Prevention of corrosion and ensuring of long life.
(b) Provision of excellent Earthing for the equipment at location with varying soil conditions.
(c) Provision for maximum weather resistance for cable end terminations, fuse carriers and fuses.
(d) Compatibility of component materials.
(e) Usage of minimum space with front opening.
(f) Provision for identification of equipment at a distance and identification of bays within the equipment once the doors are open.
(g) Minimum fire risk.
(h) Minimum outage in operations, maintenance & new connections.
(i) Provision for obtaining current measurements in each phase of each bay using a conventional clamp on ammeter.

In addition to the above in case of fiberglass feeder pillars following items shall be taken in to consideration during the construction of cubical.



(a) Suitable for outdoor use in corrosive environment.
(b) Resistant to UV degradation.
(c) Fiberglass reinforced polyester resin compound shall be used with a minimum of 20%
(d) fiberglass by weight.
(e) Hot compression-molded process shall be used for construction of the cubical.
(f) All exposed metal parts shall be 316 stainless steel.
(g) Fiberglass material shall be flame retardant & shall comply the UL94V-0 flammability test.

5.1.3. Electrical & Mechanical characteristics of equipment

The ability to withstand electrical and mechanical stress that may occur under normal, emergency and short circuit conditions within the equipment shall not be less than that of the cable terminations.

5.1.4. Connections and Connectivity

(a) Each bay should be provided with an in-built set of terminals to take up the cable cores of the three phases. Adequate space should be provided to manipulate the cores in order to phase them out and to balance loads in the phases.
(b) The bus bar leads to these cable terminations should be properly insulated from each other as well as from the shell.
(c) A common bar for neutral connection should be provided to which neutral cores of all cable ends could be effectively and readily connected.
(d) A common bar for earth connection should be provided to which earth tape/armor of all cable ends could be effectively and readily connected.
(e) A cable guide clamp should be made available to each bay so that the cable end could be rigidly secured prior to termination.
(f) Terminations should be able to incorporate lugs for cables (Al/Cu) of sizes/35mm^2 - 240mm^2.

5.1.5. Operations

(a) Each fuse base should be mounted in the shell in such a manner that pulling off a knife edged fuse could not cause any movement or vibration in the shell structure as whole or partially.
(b) Fuses should be able to be pulled off and removed individually with its cover.
(c) There should be sufficient space between the cable breakout and the bus bar terminal ends so that a clamp on ampere meter could be inserted to measure current in each phase of each bay.
(d) In case of 8 ways pillar there should be a set of bus coupling link switches in the centre. These bus coupling links should be ganged so that all three links could be switched

together.

(e) Each fuse should be provided with a LED display lamp- visible with the cover on- to indicate if it is blown or not.

5.1.6. Safety

(a) The entire cubicle should be provided with solid Earthing.

(b) Operator safety should be available with both the doors open.

(c) Provisions to connect/disconnect cables to any of the bays while the other bays are "Live" should be made.

(d) Degree of protection with the doors closed should be IP43 or better.

5.1.7. Components

(a) Each bay assembly should be removable without dismantling any other component. Each bay should be able to take in a 4 core PILC or XLPE cable of size 240mm^2.

(b) For steel enclosures the paneling of the shell should be of Hot Dip Galvanized (HDG) steel sheets and the framework of the shell should be of galvanized steel which could sustain given atmospheric and weather and wet salty ground conditions.

(c) The frontage should have two hinged doors where the right door closing solidly seated onto the left door in the closed position. Provision should be made to lock the cubicle with a brass padlock of 1 ½" size. Doors of steel enclosures should also be of HDG steel.

(d) The door hinges should be such that the doors cannot be removed without using a given tool. They should sustain the weight of the door frame for long periods while the door in open position.

(e) Mounting holes should be provided on the bottom frame for the cubicle to be mounted with floor bolts into the concrete base about 12" above ground.

(f) The top plate should be slanted towards the back side and should extend to form an eave like protection from rainwater.

(g) Cable mounting bar should be provided with slotted adjustable holes of 8mm diameter at a spacing of 15mm.

5.1.8. Assembly

(a) The feeder pillar should be delivered as a single unit. HRC fuses for the bays need not be included except in Mini Feeder Pillars. In the case of 8-way pillars bus sectioning links are to be provided with the pillar.

(b) In Mini Feeder Pillars 24 Nos. of 63A HRC Fuses for the bays should be included.

(c) Both doors should be secured in closed position at delivery.

(d) Two top hooks are to be provided inbuilt to the shell to carry the pillar by a crane.

(e) All parts of the assembly should be tightly fixed such that no item or component would fall or loosen during transport and delivery.

(f) A 5 Amp socket outlet should be available inside each shell, wired properly according to standard colour codes.

6.0 REQUIREMENTS FOR SELECTION

6.1. Quality Assurance

The manufacturer shall possess ISO 9001:2015 or latest Quality Assurance Certification for the design, manufacture and testing of Feeder Pillars and Mini Feeder Pillars. The certificate shall be valid throughout the delivery period of this bid. In the event the Feeder Pillars are manufactured in a plant under the licence of the manufacturer, the manufacturing plant shall possess ISO 9001:2015 or latest Quality Assurance Certificate for manufacturing and testing of Feeder Pillars and Mini Feeder Pillars.

The Bidder shall furnish a copy of the ISO certificate certified as true copy of the original by the manufacturer, along with the offer.

6.2. Manufacturing Experience

The manufacturer shall have minimum of ten (10) years experience in manufacturing Feeder Pillars.

The manufacturer shall furnish a list of Authorities/Utilities to whom Feeder Pillars were supplied during the past 10 years, indicating their names, addresses and contact details clearly. CEB reserves the right to communicate with Electricity supply authorities/utilities to whom meters have been supplied with regard to the performance of the meters.

If the manufacturer has supplied similar items to CEB for the last (3) years with proven sales records; without any adverse performance records, such manufacturers will be exempted from above requirements.

6.3. Type Tests

Type Test Certificates conforming to the above referred standards in clause 4.0 or any other international standard which is not less stringent, issued by:

Either

(a) an accredited independent testing laboratory acceptable to the CEB or

(b) an accredited or independent testing laboratory acceptable to the CEB where the type tests have been witnessed by CEB or a reputed independent body acceptable to CEB

shall be furnished with the offer. Type Test Certificates shall clearly indicate the relevant standard, items concerned, showing the manufacturers identity, type No. /catalogue No. and basic technical parameters. In case if the submitted type tests are according to any other international standard which is not less stringent than the specified, then the copy of the used standard in English shall be submitted with offer.

Proof of accreditation and accredited scope by a national/ international authority shall be forwarded with the offer. Test certificates shall be complete including all the pages as issued by the testing authority. Type test certificates shall be in English language. Parts of test certificates shall not be acceptable.

Following Type Test Certificates shall be furnished with offer.

a) Power frequency withstand voltage test
b) Impulse withstand voltage test
c) Weathering tests

7.0 INFORMATION TO BE FURNISHED WITH THE OFFER

Detailed documentary evidence in support of conformity of various materials and components to specified standards shall be furnished. The information shall include the following.

(a) Installation and operation instructions and procedures.

(b) Performance test certificates for each major component.

(c) Type, approval and quality assurance test certificates for beadings and packing (if Used)

(d) Natural weathering data on the materials used.

a) Relative humidity
b) Temperature
c) Contaminant concentration
d) UV exposure

(e) ISO 9001:2015 or latest Quality Assurance Certificate in accordance with clause 6.1.

(f) Manufacturer shall furnish a list of supplies with supplied item, purchaser (specifying address contact persons and contact details, country), year & quantity to prove his manufacturing experience and outside the country sales in accordance with Clause 6.2.

(g) Type Test Certificates in accordance with the clause 6.3.

(h) Duly filled and signed 'Annex - B: Schedule of Technical Requirements and Guaranteed Technical Particulars'.

8.0 SAMPLE

The selected bidder shall provide one sample from each type of the Feeder Pillar (Feeder Pillar 6 Way, Feeder Pillar 8 Way and Mini Feeder Pillar (With Fuse)) shall be made available for

inspection by a CEB Engineer. Rest of the units shall be manufactured in accordance with the sample approved.

9.0 ADDITIONAL REQUIREMENTS

9.1. Signage and Markings

(a) A secured space should be provided in the outer narrower side of the pillar cubicle to display the number assigned to it. This space should be of 5" x 22".

(b) All bays should carry a horizontal withdrawable name card holder to display the bay identification of the feeder.

(c) Bay identification numbers and their names are to be printed, painted or pasted on the inner side of the right door. Provision has to be made for this purpose.

(d) The letters CEB should be embossed on the door.

(e) Standard colour codes on all busbars at both ends and, on all terminals, including incoming and outgoing should be available.

(f) Markings on Neutral and Earth bars at both ends should be provided.

(g) Name plate of CEB should be available at the top left corner of the shell as follows:

	Property of Ceylon Electricity Board 8 way Feeder Pillar (Type of the Feeder Pillar)

(h) Feeder Pillar Type, Bid number, Date of Manufacture, Serial Number, Rated voltage and current etc. should be available in a sticker and fixed inside the Shell at the rear side of the door.

9.2. Technical Literature

The selected bidder should supply all relevant drawings, technical literature, handbooks etc. along with the equipment in order to facilitate faultless operation.

10.0 INSPECTION AND TESTING

The selected Tender shall make arrangements for inspection by an Engineer as appointed. by the CEB and also carry out in his presence necessary simulation and conventional tests of component or/and materials as the need may arise.

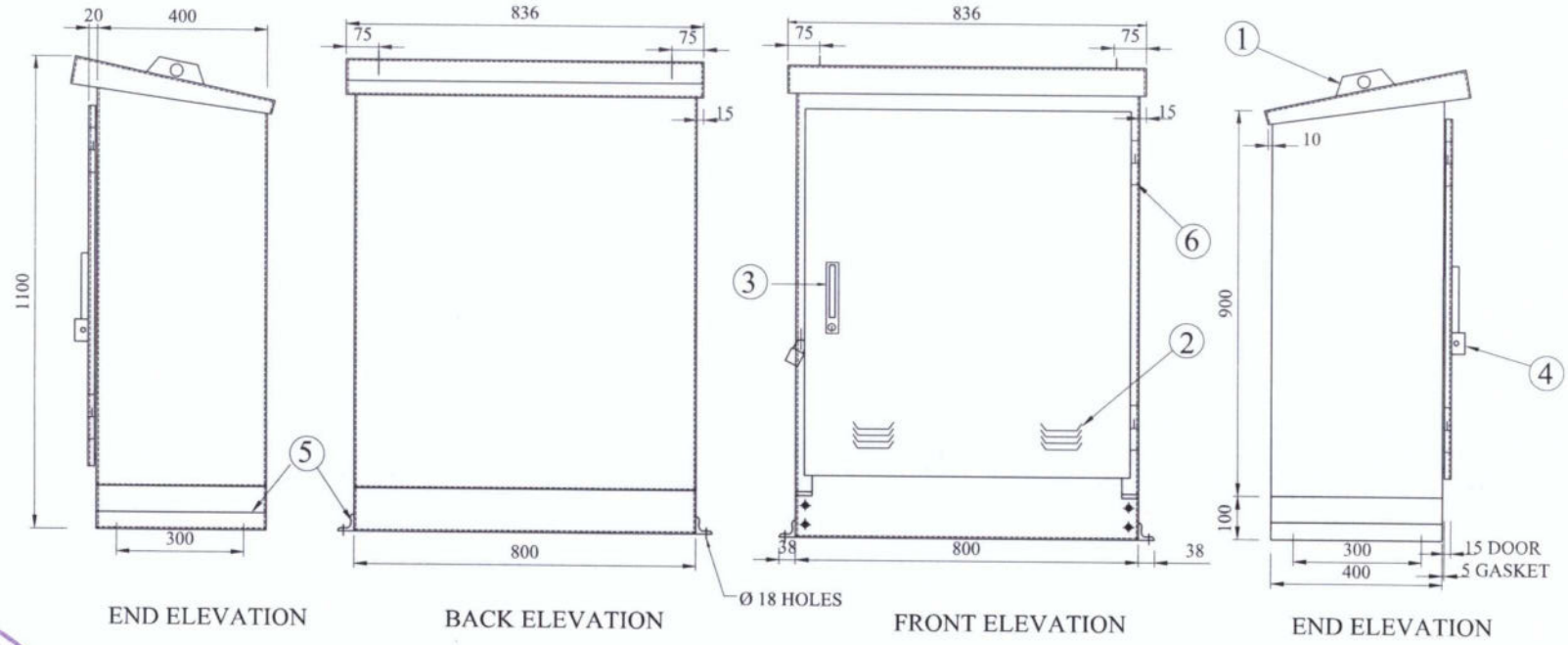
11.0 ANNEX

Annex – A1 – C9: Constructional Drawings of Feeder Pillars

Annex – D: Schedule of Technical Requirements and Guaranteed Technical Particulars

Annex – E: Non-Compliance Schedule

CEB Approved Specification
23/01/2024
Chairman Dist. Coordination Committee



END ELEVATION BACK ELEVATION FRONT ELEVATION END ELEVATION

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23/01/2024
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NO	DESCRIPTION
1	LIFTING LUG
2	LOUVRES ON DOOR
3	LOCKABLE HANDLE
4	PROVISION FOR PASLOCK
5	PROVISION FOR MOUNT ON FLOOR(38X38X6)
6	DOOR HINGES

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	MINI FEEDER PILLAR OUT LINE ARRANGEMENT	DRAWN : SUMUDU / COPIED : HARSHA
		DATE : OCT. 2023
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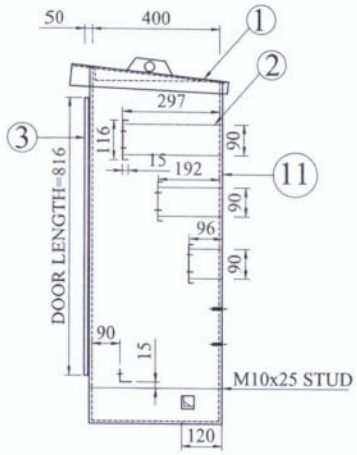
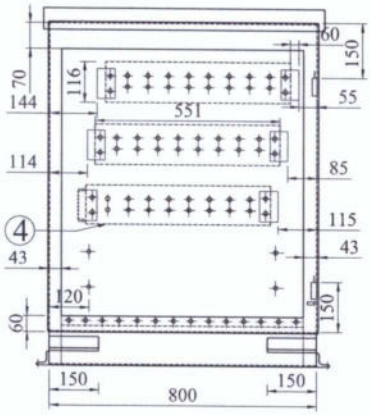
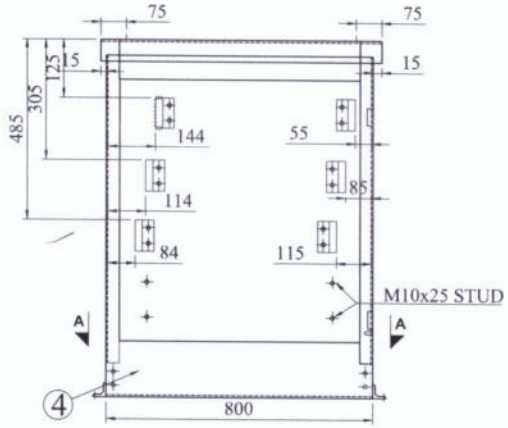
		SOURCE : DGM(CC)/DO/CO/12/66-1



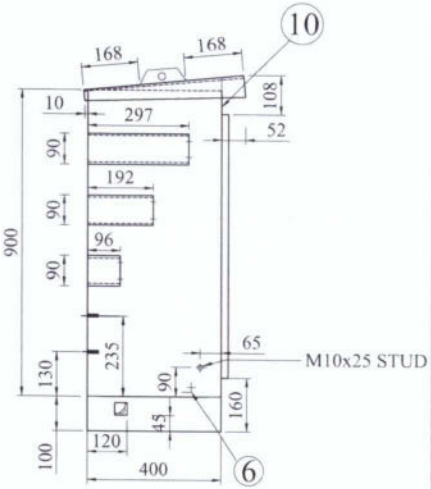
SEC.END ELEVATION
(WITHOUT FUSES)



SEC.FRONT ELEVATION



FRONT ELEVATION
WITHOUT DOOR



SEC.END ELEVATION
WITHOUT FUSES MOUNTING PLATE

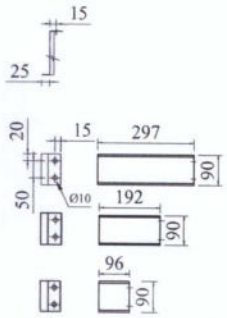
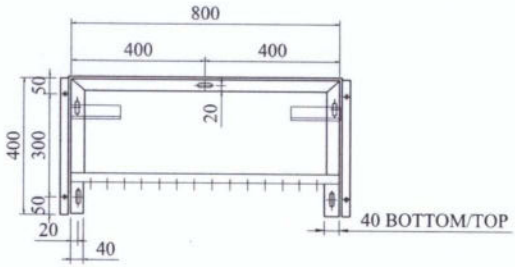
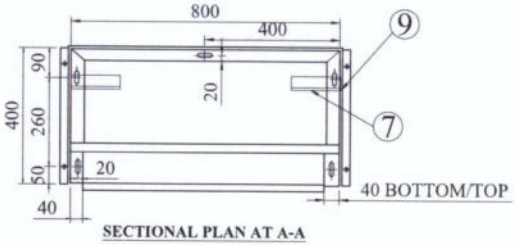


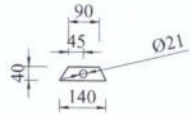
PLATE MOUNTING BRACKETS



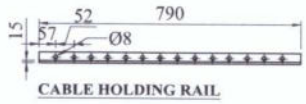
PLAN OF BASE



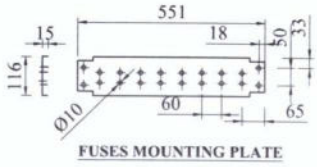
SECTIONAL PLAN AT A-A



3mm THK.LIFTING LUG



CABLE HOLDING RAIL



FUSES MOUNTING PLATE

NO:	DESCRIPTION
1	ROOF
2	FUSES MOUNTING SUPPORT
3	DOOR
4	FUSES MOUNTING PLATE
5	BOTTOM FRONT PLATE
6	CABLES HOLDING RAIL
7	CABLE CLAMP HOLDER
8	BOTTOM SHELL
9	FLOOR MOUNTING SUPPORTS
10	TOP FRONT PLATE
11	SHELL

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23/01/2024
Chairman Dist. Coordination Committee

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION STANDARDS & SPECIFICATION

MINI FEEDER PILLAR
FABRICATION ARRANGEMENT

Extract of:-
FEEDER PILLAR SPECIFICATION

APPROVED BY

CHAIRMAN,
SPECIFICATION COMMITTEE

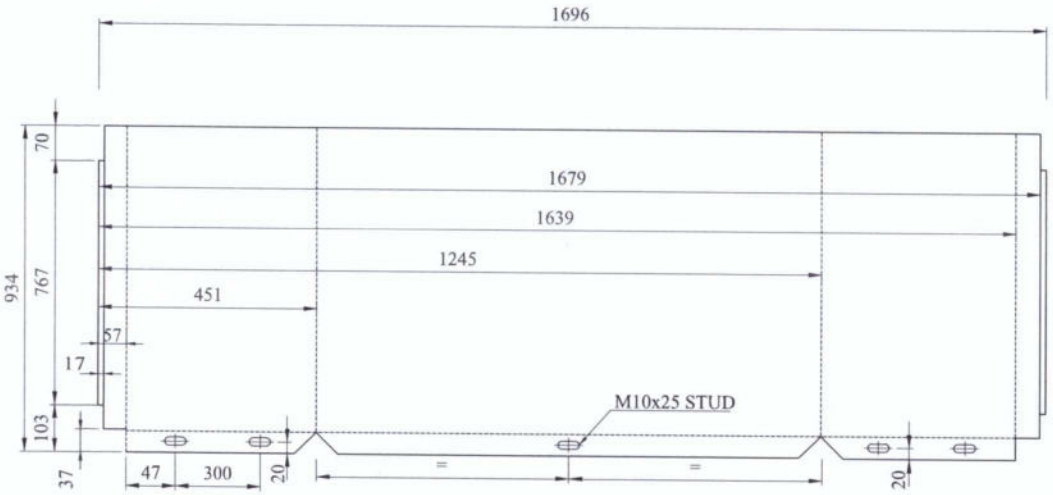
SCALE : NOT TO SCALE

DRAWN : SUMUDU | COPIED : HARSHA

DATE : OCT. 2023

DRG. NO : DS&S/2023/048/A2

SOURCE : DGM(CC)/DO/CO/12.66-2



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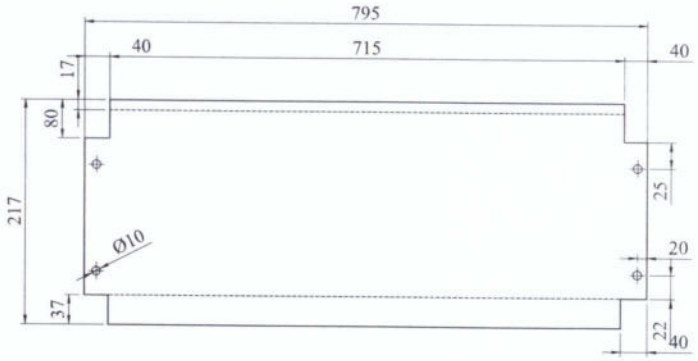

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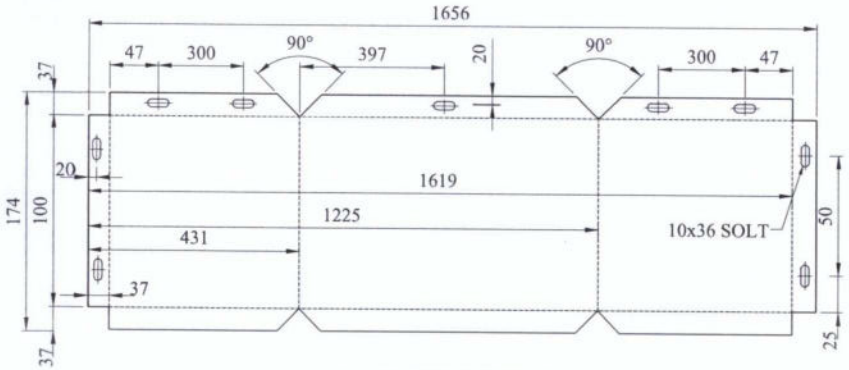

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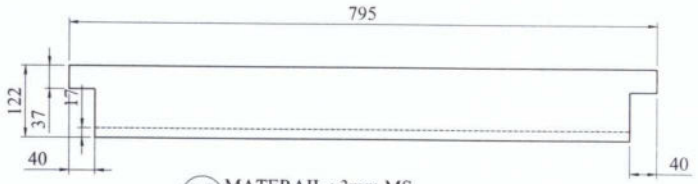

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ALL DIMMENSIONS ARE IN MILLIMETRES

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		DATE : OCT. 2023
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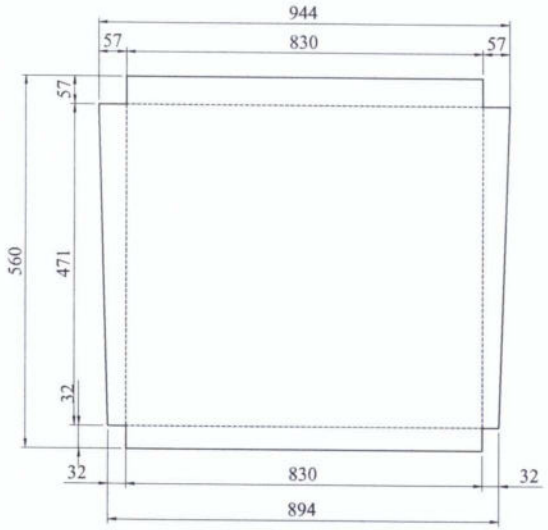

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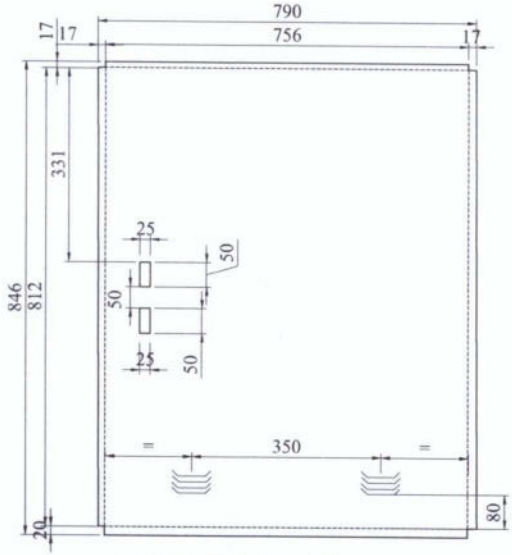

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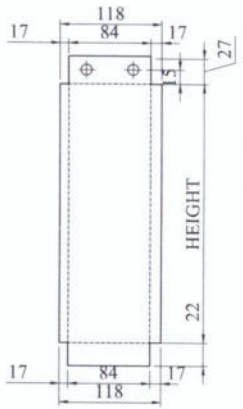

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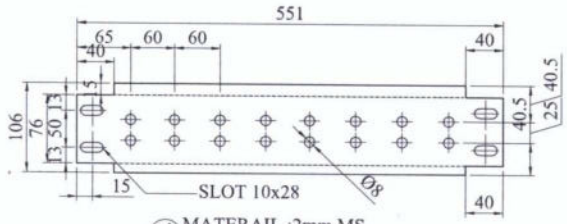
HEIGHT
297
192
96



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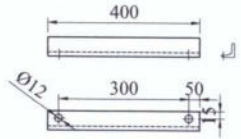
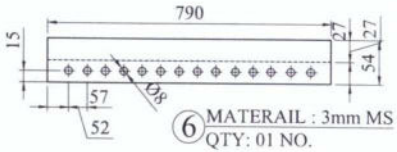


⑨ MATERAIL : 38x38x6 A.I
QTY: 01 NO.

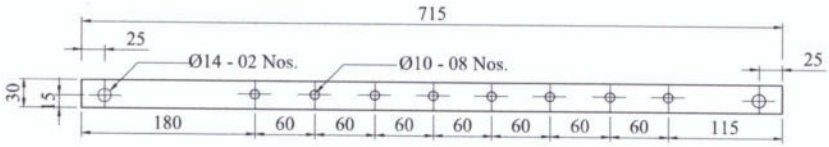


⑥ MATERAIL : 3mm MS
QTY: 01 NO.

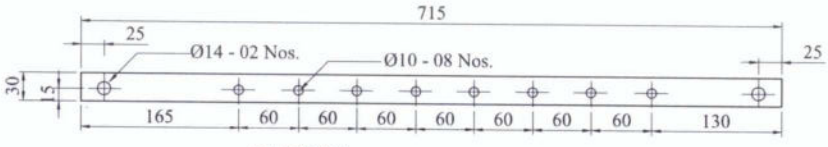
CEB Approved Specification
23/01/2024
Chairman Dist. Coordination Committee

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	MINI FEEDER PILLAR SHELL ARRANGEMENT	DRAWN : SUMUDU / COPIED : HARSHA
	Extract of:- FEEDER PILLAR SPECIFICATION / APPROVED BY	DATE : OCT. 2023
		DRG. NO : DS&S/2023/048/A4
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/66-5



PHASE "a"
30x3 FLAT COPPER



PHASE "b"
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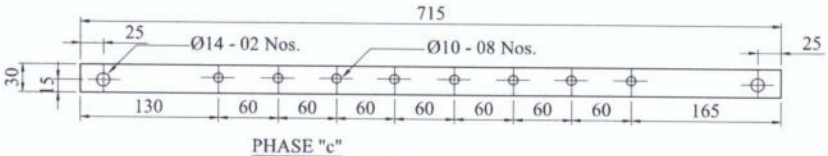
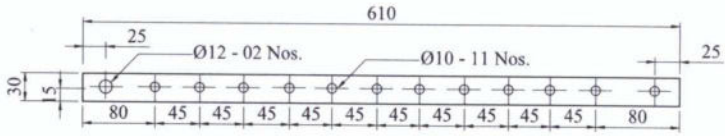
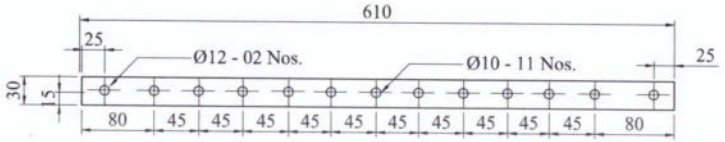


PHASE "c"
30x3 FLAT COPPER



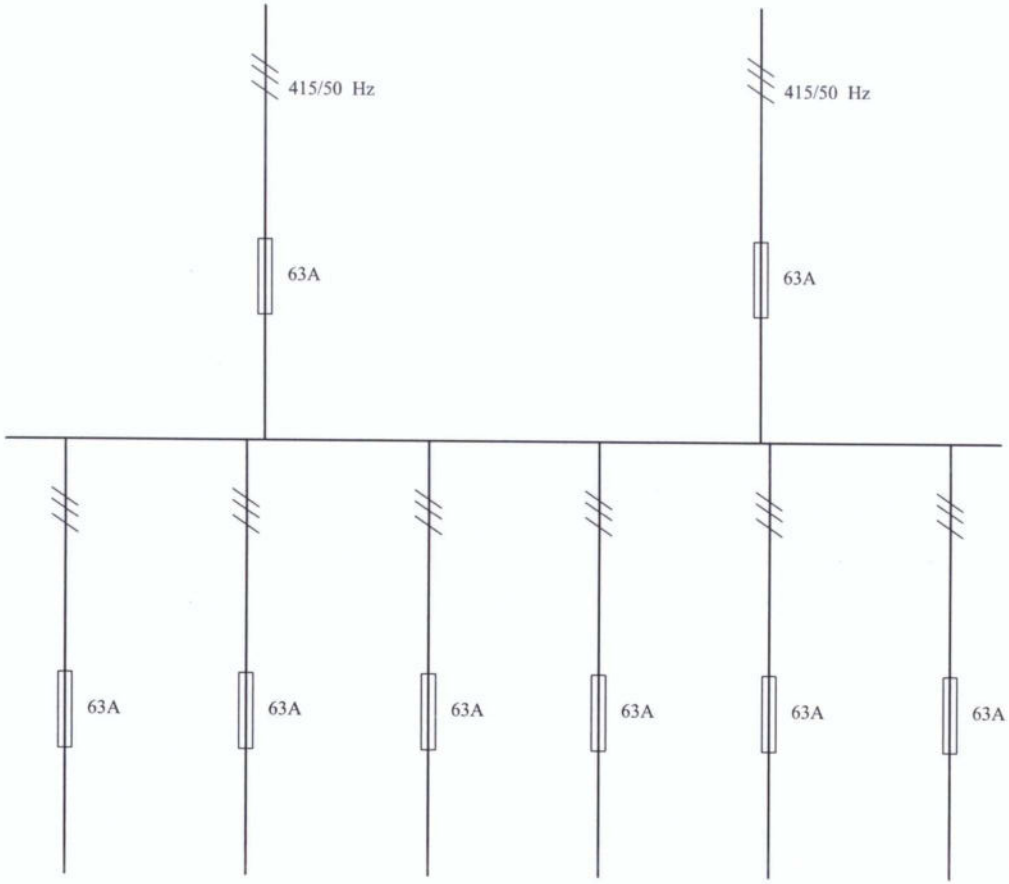
"EARTH" PHASE
30x3 FLAT COPPER



"NEUTRAL" PHASE
30x3 FLAT COPPER

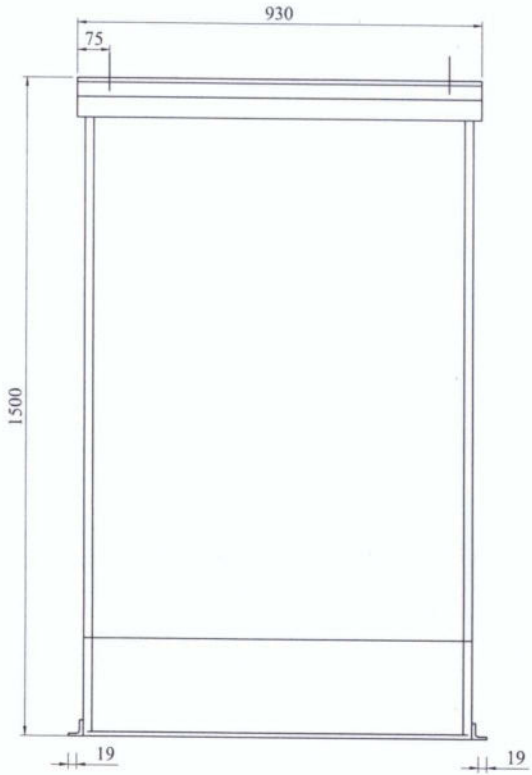
ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	MINI FEEDER PILLAR COPPER BUS BARS	DRAWN : SUMUDU COPIED : HARSHA
		DATE : OCT. 2023
	Extract of:- FEEDER PILLAR SPECIFICATION APPROVED BY	DRG. NO : DS&S/2023/048/A5
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/66-6

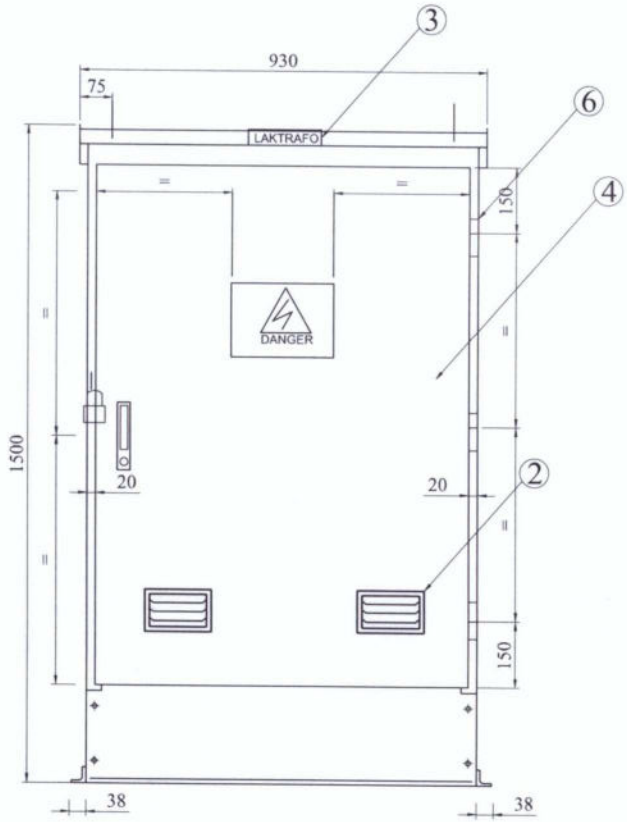


ALL DIMMENSIONS ARE IN MILLIMETRES

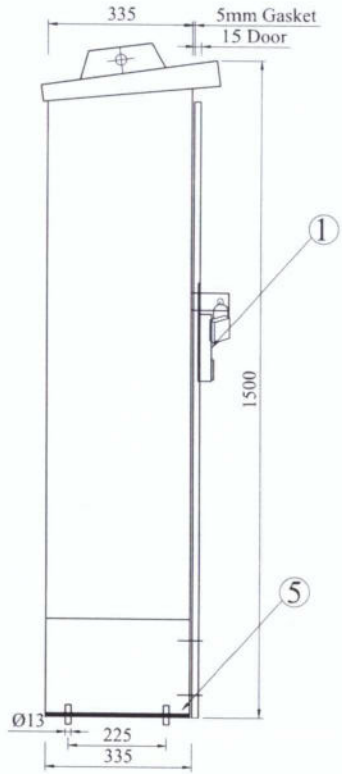
CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	MINI FEEDER PILLAR SINGLE LINE DIAGRAM	DRAWN : SUMUDU COPIED : HARSHA
		DATE : OCT. 2023
	Extract of:- FEEDER PILLAR SPECIFICATION APPROVED BY	DRG. NO : DS&S/2023/048/A6
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/66-7



BACK ELEVATION



SEC.FRONT ELEVATION



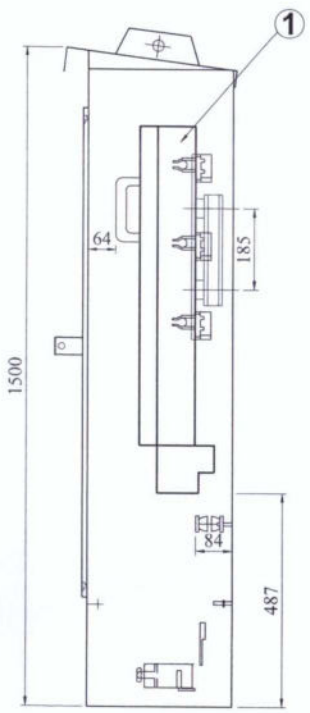
END ELEVATION

NO:	DESCRIPTION
1	LOCKABLE TYPE HANDLE
2	VENTILATION LOUVERS
3	LTL NAME PLATE
4	DANGER MARK WITH VOLTAGE
5	PROVISION FOR MOUNTINGS (38x38x6 Al.)
6	HINGS (BOLTED - INDIAN)

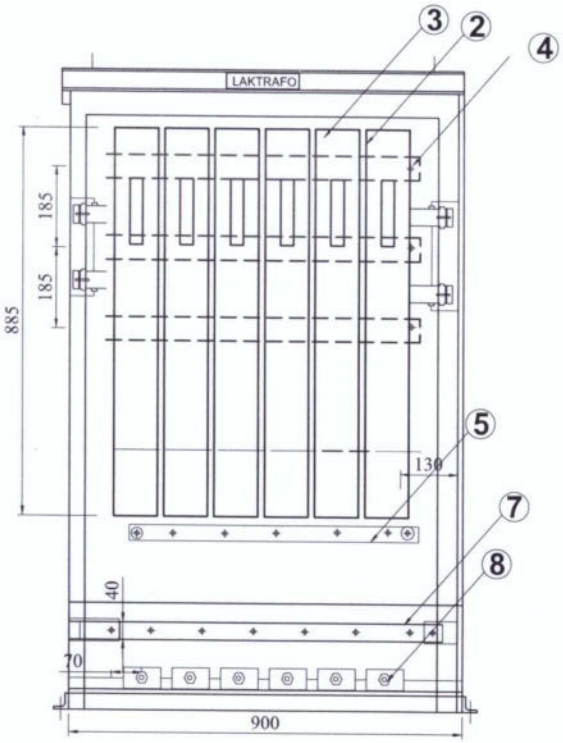
ALL DIMMENSIONS ARE IN MILLIMETRES

CEB Approved Specification
23/01/2024
Chairman Dist. Coordination Committee

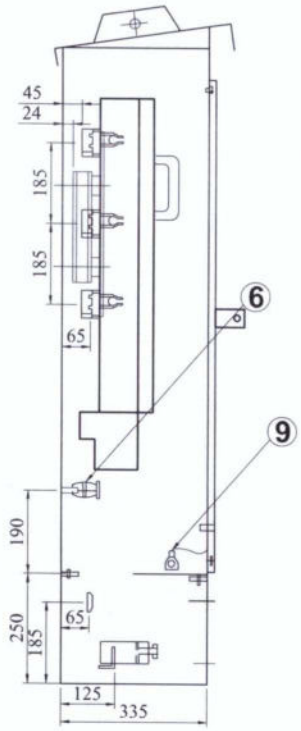
CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	6-WAY FEEDER PILLAR OUTLINE ARRANGEMENT	DRAWN : AMILA / COPIED : HARSHA
		DATE : OCT. 2023
	Extract of:- FEEDER PILLAR SPECIFICATION APPROVED BY	DRG. NO : DS&S/2023/048/B1
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/65-1



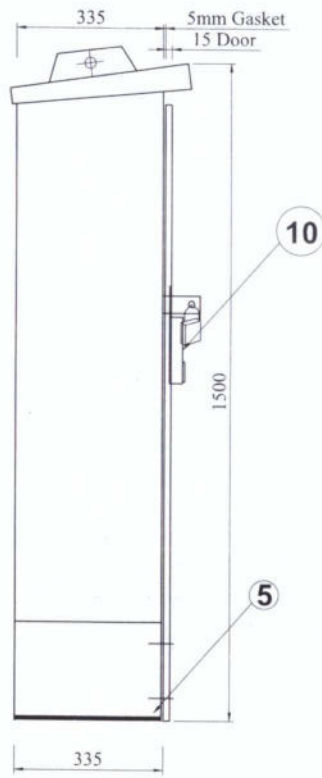
SECTIONAL END ELEVATION



SECTIONAL FRONT ELEVATION



SECTIONAL END ELEVATION



END ELEVATION

NO:	DESCRIPTION	NO:	DESCRIPTION
1	415V,400V FUSEWAY	7	TIN PLATED 30x3x870 FLAT COPPER
2	EBONITE COVER-1mm THK	8	CABLE CLAMP - LARGE SIZE
3	400A FUSE	9	EARTH WIRE FOR SHELL/DOOR
4	TIN PLATED 50x6x690 FLAT COPPER	10	PROVISION FOR PADLOCK
5	TIN PLATED 38x6x700 FLAT COPPER (N)		
6	BUSBAR INSULATOR		

CEB Approved Specification
Chairman Dist. Coordination Committee
23/01/2024

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION STANDARDS & SPECIFICATION

6-WAY FEEDER PILLAR

ASSEMBLY

Extract of:-
FEEDER PILLAR SPECIFICATION

APPROVED BY

CHAIRMAN,
SPECIFICATION COMMITTEE

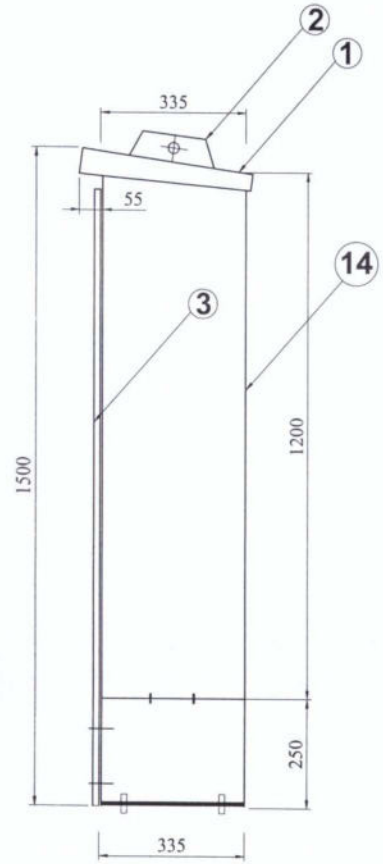
SCALE : NOT TO SCALE

DRAWN : AMILA | COPIED : HARSHA

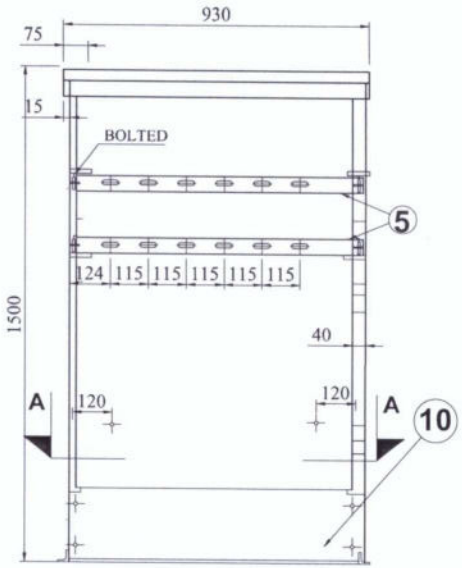
DATE : OCT. 2023

DRG. NO : DS&S/2023/048/B2

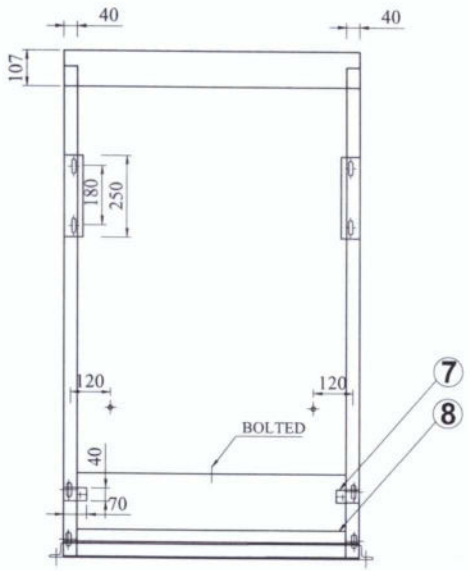
SOURCE : DGM(CC)/DO/CO/12/65-2



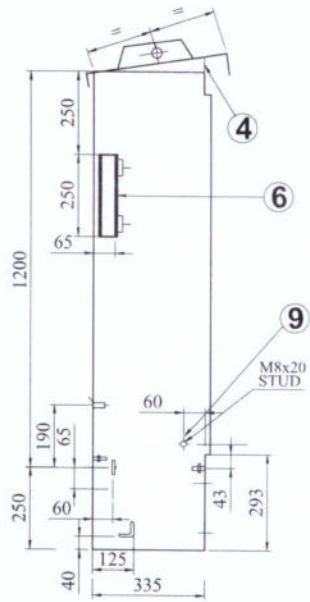
END ELEVATION



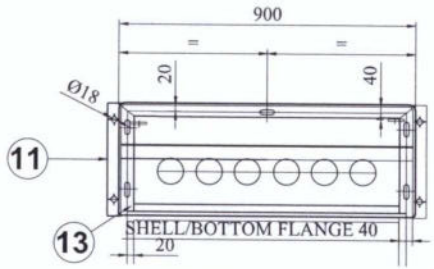
SECTIONAL FRONT ELEVATION



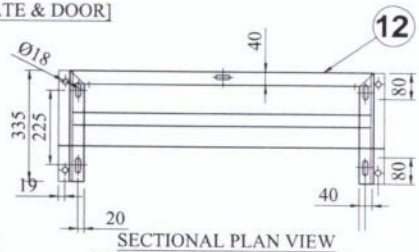
FRONT ELEVATION
[WITHOUT FRON TOP PLATE,
BOTTOM FRONT PLATE & DOOR]



SECTIONAL END ELEVATION



SECTIONAL PLAN A-A



SECTIONAL PLAN VIEW
[WITHOUT FROM TOP PLATE,
BOTTOM FRONT PLATE & DOOR]

NO:	DESCRIPTION	NO:	DESCRIPTION
1	ROOF -3mm MS	8	CABLE CLAMP SUPPORT-38x38x6 Al
2	LIFTING LUG - 3mm MS	9	M8x25 STUD FOR SHELL+DOOR EARTHING
3	DOOR - 2mm GI	10	RAIL SUPPORT BRACKET-3mm MS
4	TOP FRONT PLATE - 3mm MS	11	PROVISION FOR MOUNTINGS-38x38x6 Al
5	FUSE SUPPORTING RAIL - 3mm MS	12	BOTTOM SHELL-3mm MS
6	ENDS RAIL SUPPORT BRACKET-3mm MS	13	BOTTOM SHELL - 3mm MS
7	EARTHING SUPPORT BRACKET-3mm MS	14	SHELL - 3mm MS

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION STANDARDS & SPECIFICATION

6-WAY FEEDER PILLAR
FABRICATION ARRANGEMENT

Extract of:-
FEEDER PILLAR SPECIFICATION

APPROVED BY

CHAIRMAN,
SPECIFICATION COMMITTEE

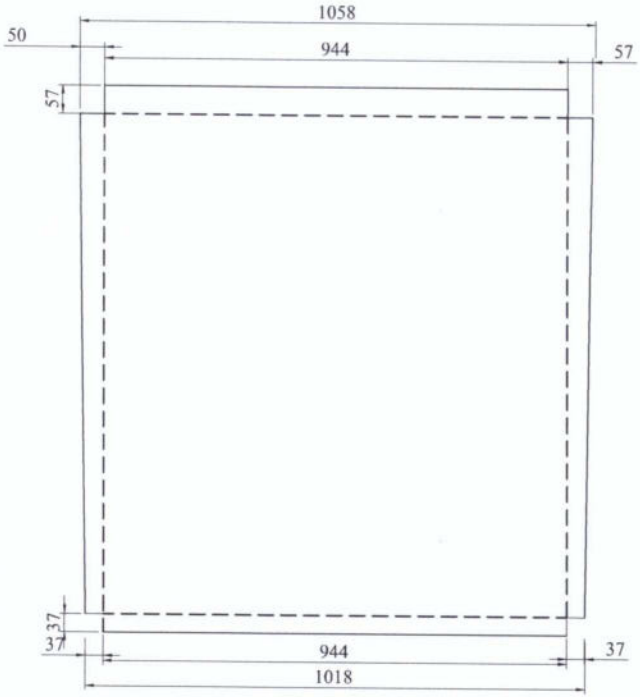
SCALE : NOT TO SCALE

DRAWN : AMILA | COPIED : HARSHA

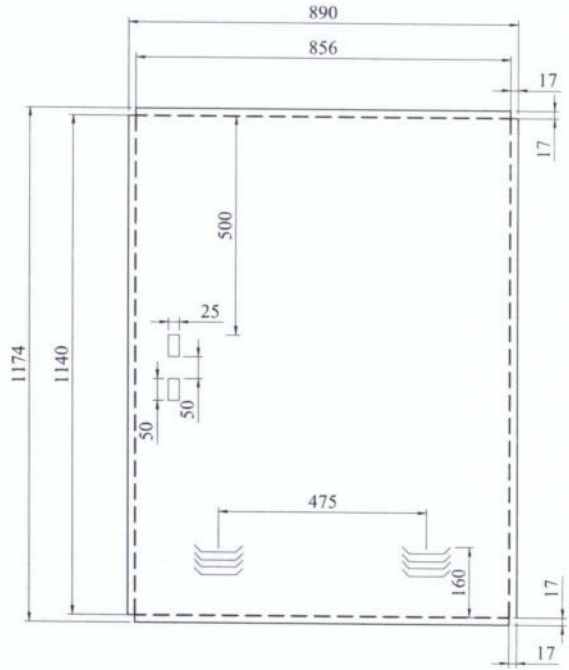
DATE : OCT. 2023

DRG. NO : DS&S/2023/048/B3

SOURCE : DGM(CC)/DO/CO/12/65-3



(1) MATERAIL : 3mm MS
QTY: 01 NO.



(3) MATERAIL : 2mm GS
QTY: 01 NO.

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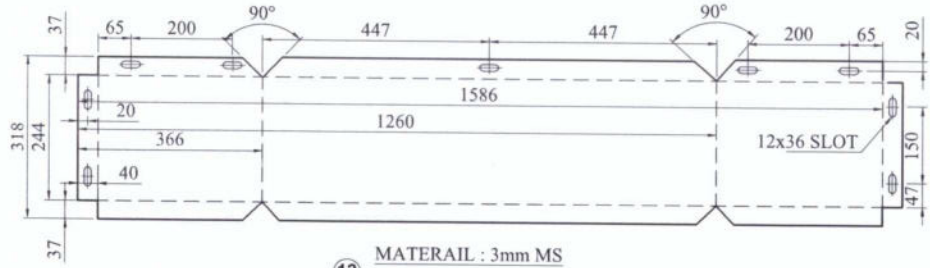
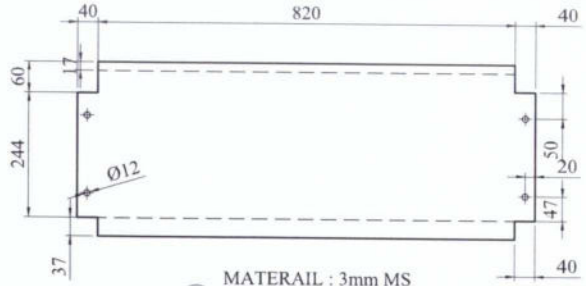
23/01/2024
Chairman Dist. Coordination Committee

ALL DIMMENSIONS ARE IN MILLIMETRES

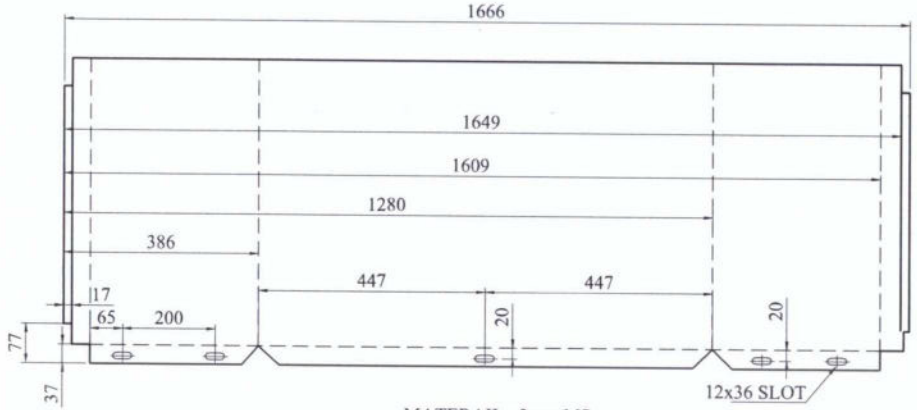
CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	6-WAY FEEDER PILLAR SHELL ARRANGEMENT	DRAWN : AMILA / COPIED : HARSHA
		DATE : OCT. 2023
DISTRIBUTION COORDINATION BRANCH	Extract of:- FEEDER PILLAR SPECIFICATION / APPROVED BY CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2023/048/B4
		SOURCE : DGM(CC)/DO/CO/12/65-4



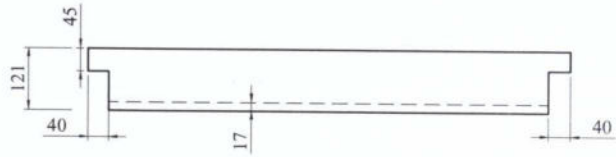
(12) MATERAIL : 3mm MS
QTY: 01 NO.



(10) MATERAIL : 3mm MS
QTY: 01 NO.



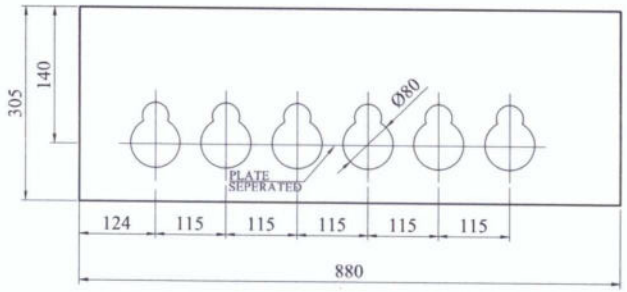
(14) MATERAIL : 3mm MS
QTY: 01 NO.



(4) MATERAIL : 3mm MS
QTY: 01 NO.

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	6-WAY FEEDER PILLAR SHELL ARRANGEMENT	DRAWN : AMILA / COPIED : HARSHA
	Extract of:- FEEDER PILLAR SPECIFICATION / APPROVED BY	DATE : OCT. 2023
		DRG. NO : DS&S/2023/048/B5
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/65-5



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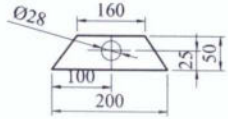
QTY: 0 NO.



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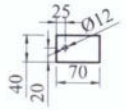
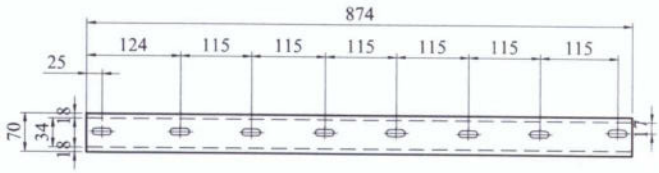


(7) MATERAIL : 3mm MS
QTY: 02 NO.



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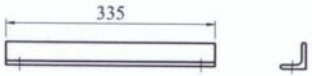
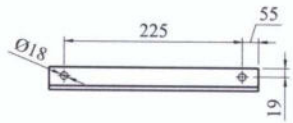
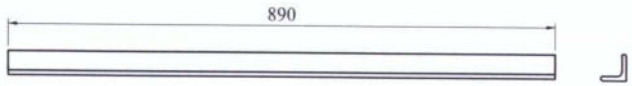
QTY: 01 NO.





(11) MATERAIL : 38x38x6 A.I
QTY: 01 NO.

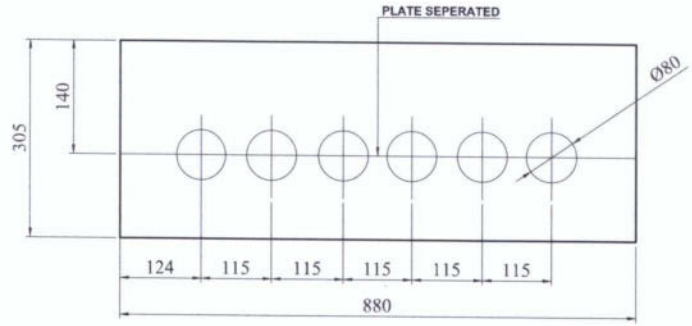


(8) MATERAIL : 38x38x6 A.I
QTY: 01 NO.

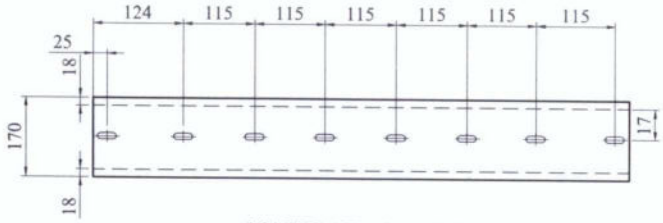
CEB Approved Specification
23/01/2024
Chairman Dist. Coordination Committee

ALL DIMMENSIONS ARE IN MILLIMETRES

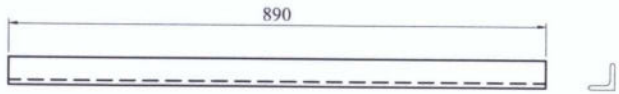
CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	6-WAY FEEDER PILLAR SHELL ARRANGEMENT	DRAWN : AMILA / COPIED : HARSHA
	Extract of:- FEEDER PILLAR SPECIFICATION / APPROVED BY	DATE : OCT. 2023
		DRG. NO : DS&S/2023/048/B6
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/65-6



(13) **MATERAIL : 3mm MS**
QTY: 0 NO.



(5) MATERAIL : 3mm MS
QTY: 02 NO.

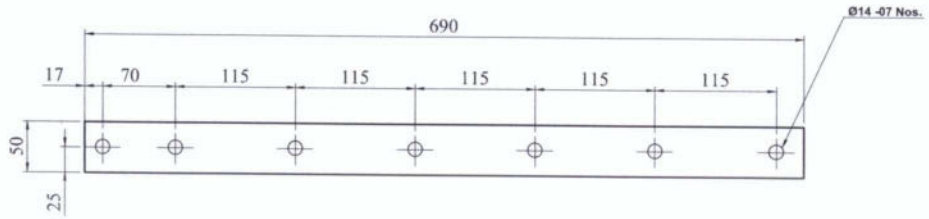


(8) MATERAIL : 38x38x6 A.I
QTY: 01 NO.

CEB Approved Specification
23/01/2024
Chairman Dist. Coordination Committee

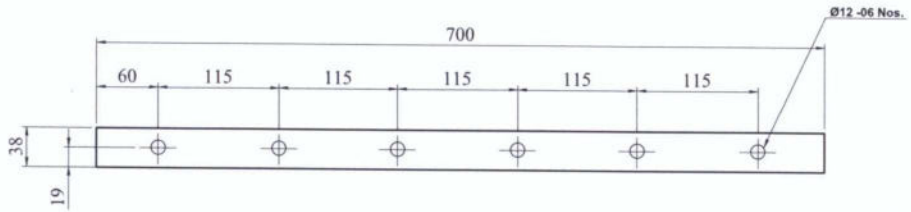
ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	6-WAY FEEDER PILLAR SHELL ARRANGEMENT	DRAWN : AMILA / COPIED : HARSHA
		DATE : OCT. 2023
DISTRIBUTION COORDINATION BRANCH	Extract of:- FEEDER PILLAR SPECIFICATION / APPROVED BY CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2023/048/B7
		SOURCE : DGM(CC)/DO/CO/12/65-7



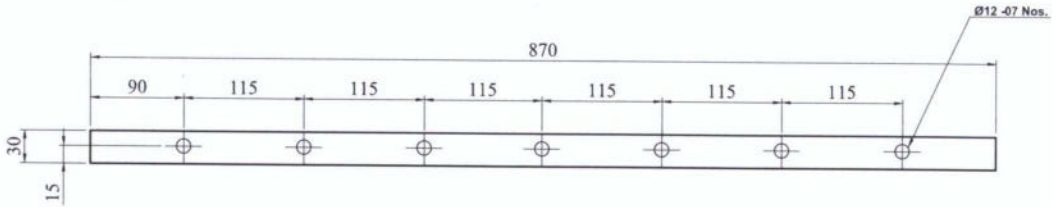
PHASES

50x6 FLAT COPPER



N/BAR

38x6 FLAT COPPER



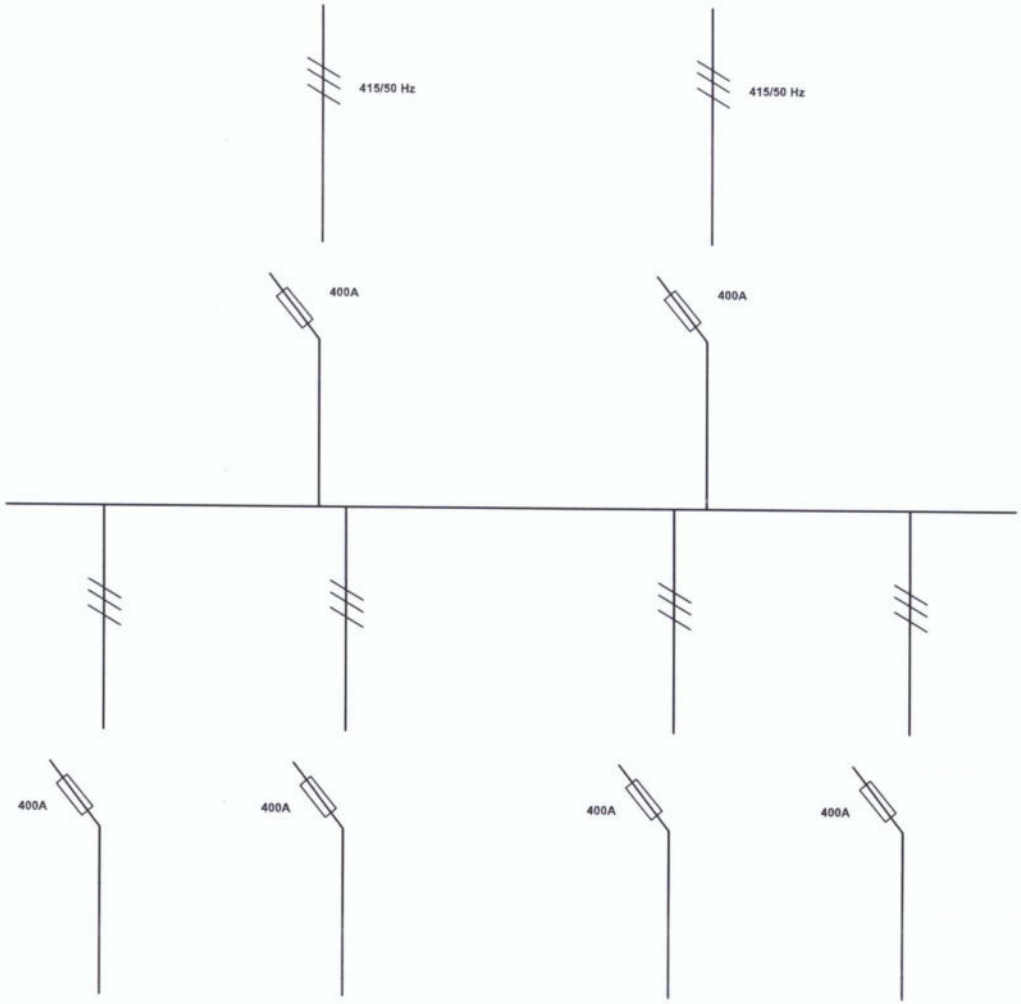
E/BAR

30x3 FLAT COPPER

NOTE: ALL FLAT CU's ARE TIN PLATED

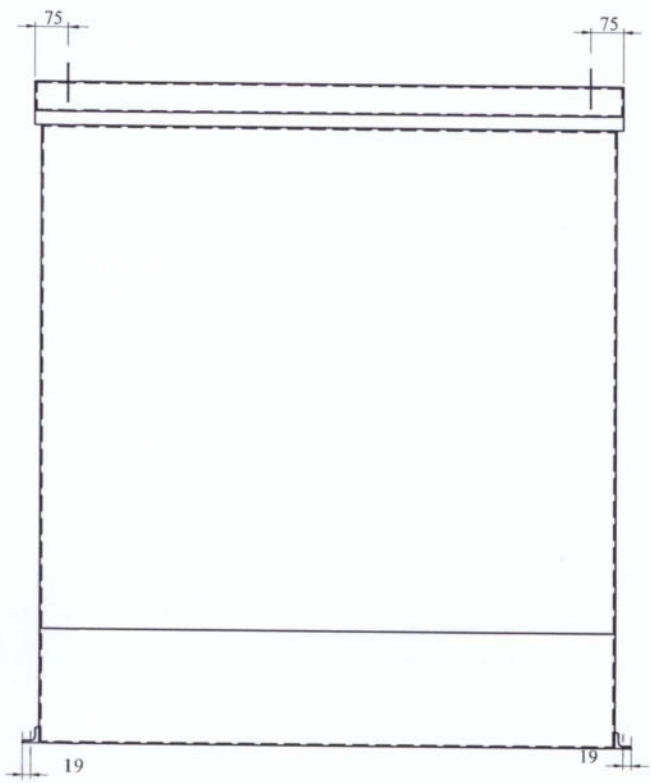
ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	6-WAY FEEDER PILLAR COPPER BUS BARS	DRAWN : AMILA / COPIED : HARSHA
		DATE : OCT. 2023
DISTRIBUTION COORDINATION BRANCH	Extract of:- FEEDER PILLAR SPECIFICATION APPROVED BY CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2023/048/B8 SOURCE : DGM(CC)/DO/CO/12/65-8

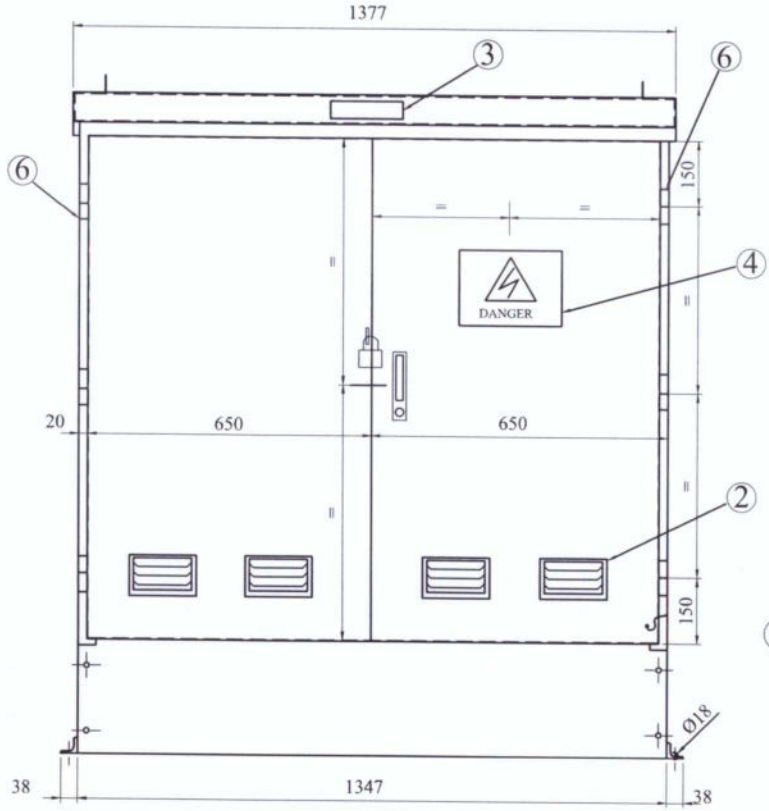


ALL DIMMENSIONS ARE IN MILLIMETRES

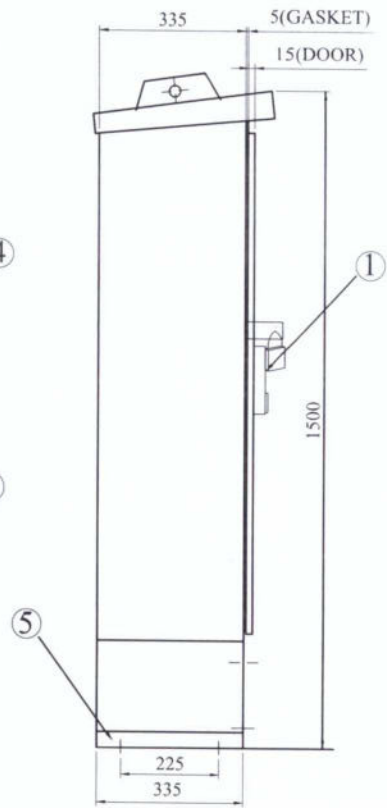
CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	6-WAY FEEDER PILLAR SINGLE LINE DIAGRAM	DRAWN : AMILA COPIED : HARSHA
		DATE : OCT. 2023
DISTRIBUTION COORDINATION BRANCH	Extract of:- FEEDER PILLAR SPECIFICATION APPROVED BY CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2023/048/B9
		SOURCE : DGM(CC)/DO/CO/12/65-9



BACK ELEVATION



SECTIONAL FRONT ELEVATION



END ELEVATION

SURFACE TREATMENT:
SHELL
3mm mild STEEL
HOT DIP GALVANIZED (60µ)
POWER COATED (60µ)
COLOUR RAL6028

DOOR
2mm GALVANIZES STEEL SHEET
POWDER COATED(60µ)
COLOUR RAL6028

NO	DESCRIPTION
1	LOCKABLE TYPE HANDLE
2	VENTILATION LOUVERS
3	NAME PLATE
4	DANGER MARK WITH VOLTAGE
5	PROVISION FOR MOUNTINGS(38X38X6 A,1)
6	HINGES

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23/01/2024
CEYLON ELECTRICITY BOARD
DISTRIBUTION COORDINATION BRANCH

ALL DIMMENSIONS ARE IN MILLIMETRES

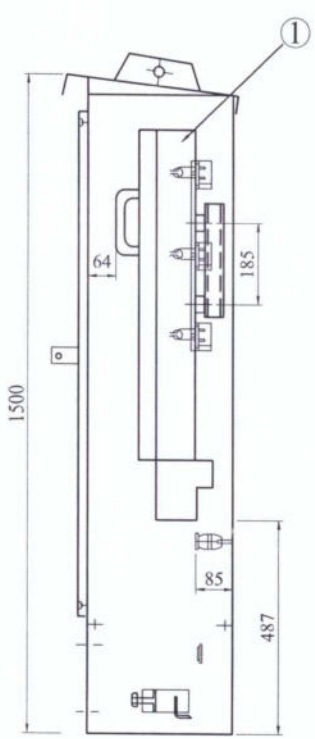
DISTRIBUTION STANDARDS & SPECIFICATION

8 WAY FEEDER PILLAR
OUT LINE ARRANGEMENT

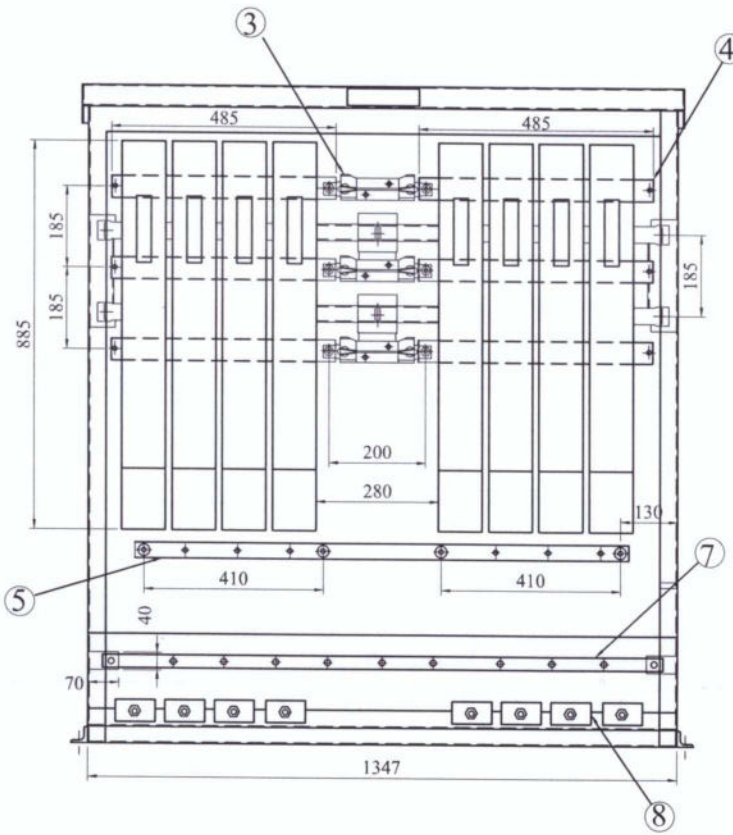
Extract of:-
FEEDER PILLAR SPECIFICATION

APPROVED BY
CHAIRMAN,
SPECIFICATION COMMITTEE

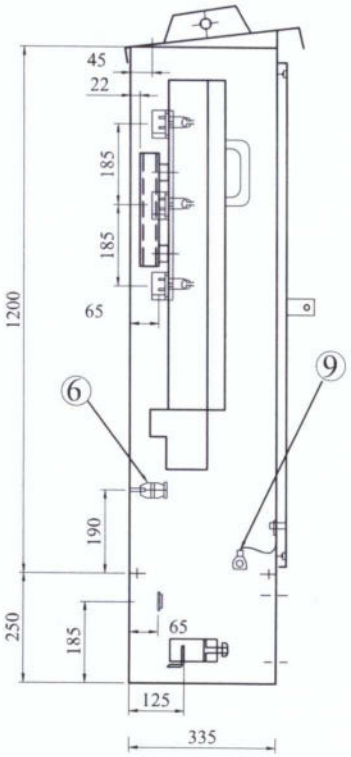
SCALE : NOT TO SCALE
DRAWN : AMILA | COPIED : HARSHA
DATE : OCT. 2023
DRG. NO : DS&S/2023/048/C1
SOURCE : DGM(CC)/DO/CO/12/64-1



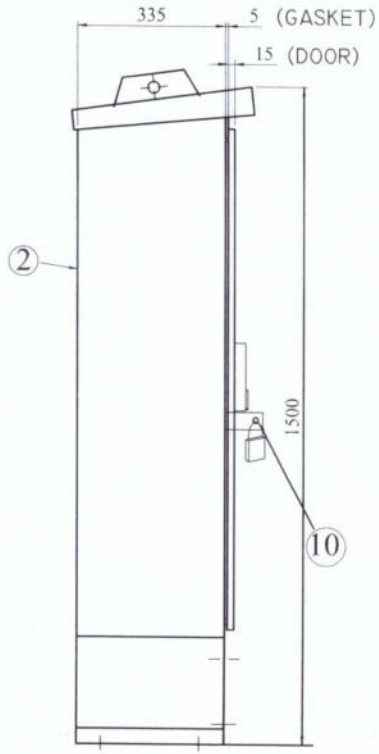
SEC.END ELEVATION



SEC.FRONT ELEVATION



SEC.END ELEVATION



END ELEVATION

NO.	DESCRIPTION	NO.	DESCRIPTION
1	415V,400A FUSEWAY	6	BUSBAR INSULATOR
2	SHEEL -3mm MS	7	TIN PLATED 30X3X1320 FLAT COPPER(E)
3	400A FUSE		
4	TIN PLATED 50X6X485 FLAT COPPER	8	CABLE CLAMP-LARGE SIZE
		9	EARTH WIRE FOR SHELL/DOOR
5	TIN PLATED 38X6X510 FLAT COPPER(N)	10	PROVISION FOR PADLOCK

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23/01/2024

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION STANDARDS & SPECIFICATION

MINI FEEDER PILLAR

ASSEMBLY

Extract of:-
FEEDER PILLAR SPECIFICATION

APPROVED BY

CHAIRMAN,
SPECIFICATION COMMITTEE

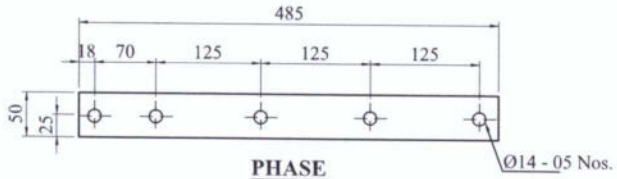
SCALE : NOT TO SCALE

DRAWN : AMILA | COPIED : HARSHA

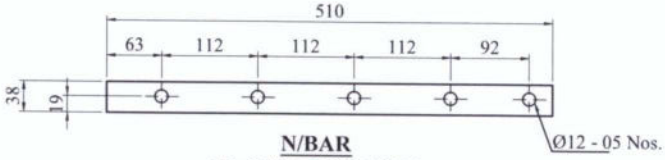
DATE : OCT. 2023

DRG. NO : DS&S/2023/048/C2

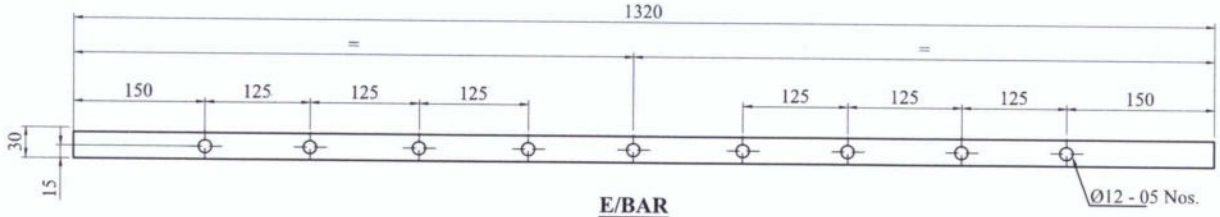
SOURCE : DGM(CC)/DO/CO/12/64-2



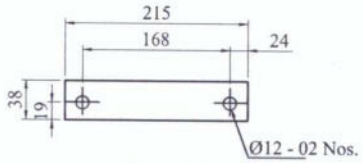
PHASE
50x6 FLAT COPPER



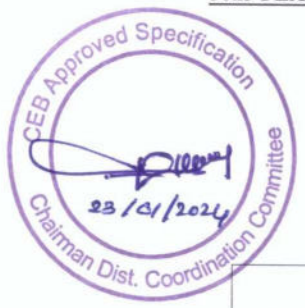
N/BAR
38x6 FLAT COPPER



E/BAR
30x3 FLAT COPPER



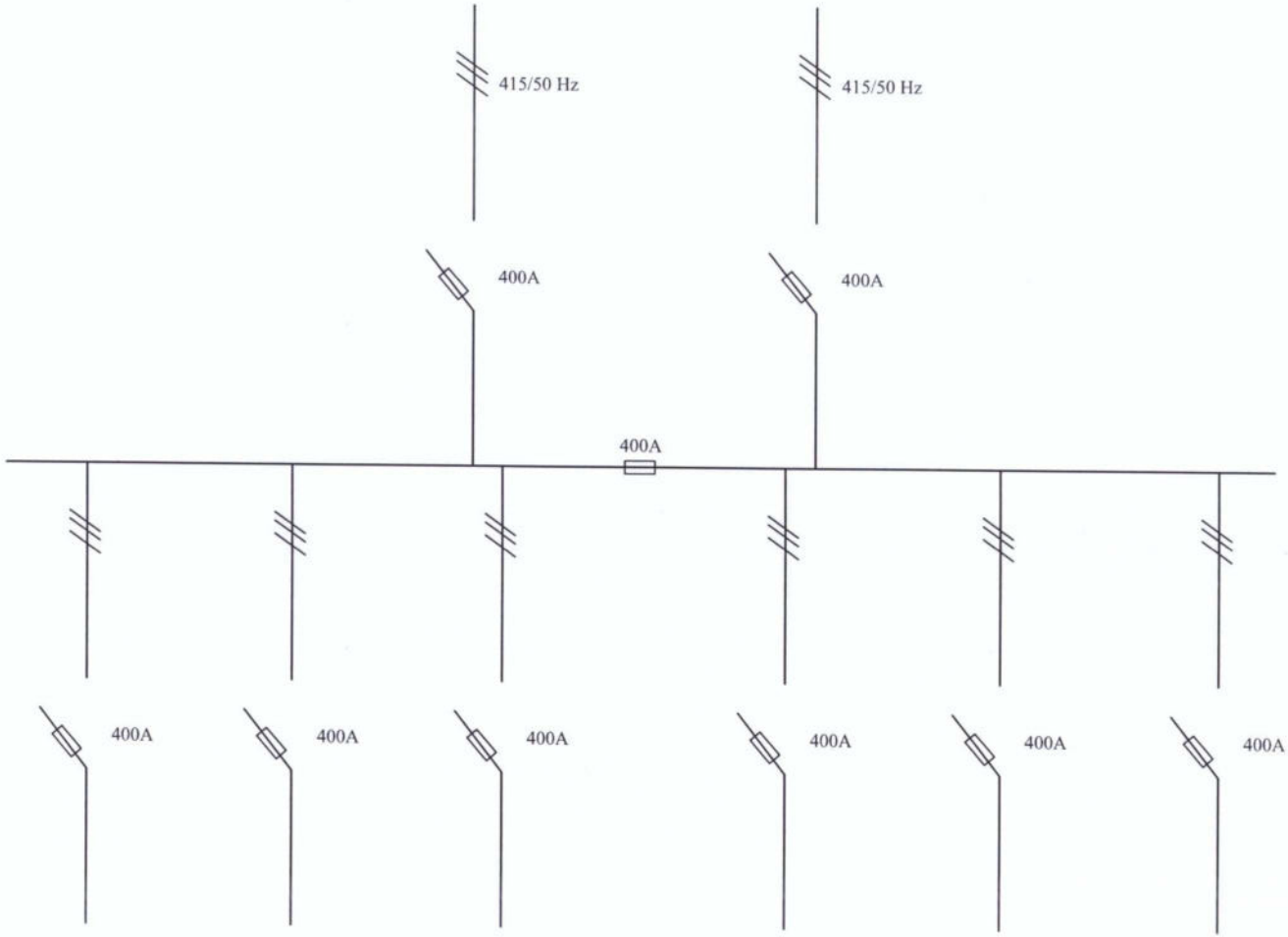
"N" LINK
38x6 FLAT COPPER



NOTE: ALL FLAT CU s' ARE TIN PLATED

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	8 WAY FEEDER PILLAR COPPER BUS BARS	DRAWN : MADARA COPIED : HARSHA
		DATE : OCT. 2023
DISTRIBUTION COORDINATION BRANCH	Extract of:- FEEDER PILLAR SPECIFICATION APPROVED BY CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2023/048/C3
		SOURCE : DGM(CC)/DO/CO/12/64-3



ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	8 WAY FEEDER PILLAR SINGLE LINE DIAGRAM	DRAWN : MADARA / COPIED : HARSHA
		DATE : OCT. 2023
DISTRIBUTION COORDINATION BRANCH	Extract of:- FEEDER PILLAR SPECIFICATION APPROVED BY CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2023/048/C4
		SOURCE : DGM(CC)/DO/CO/12/64-4

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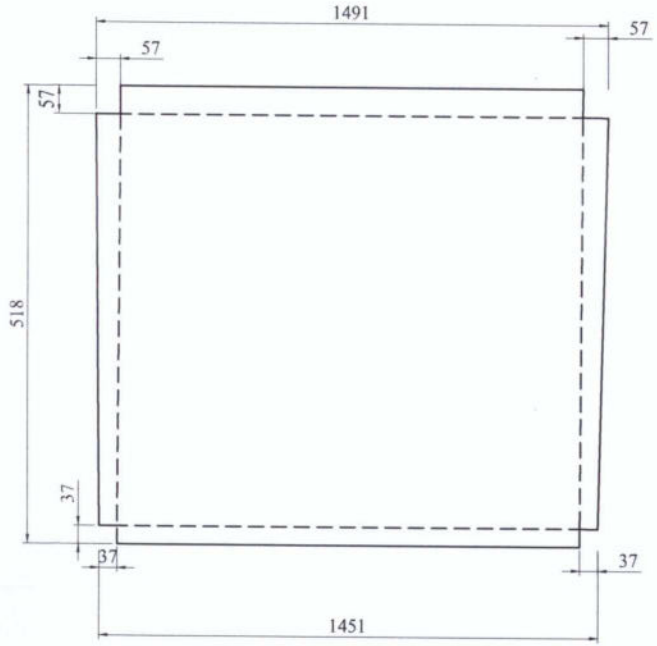
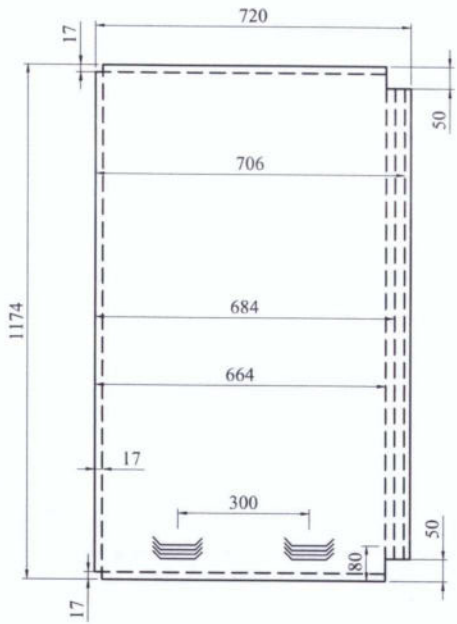
Chairman Dist. Coordination Committee

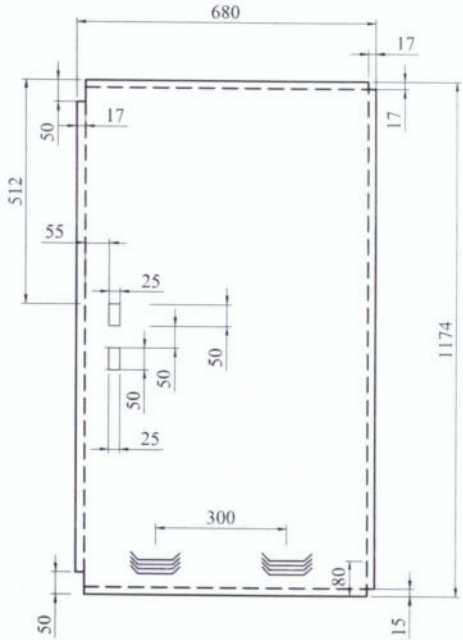


ROOF

① MATERAIL : 3mm MS
QTY: 01 NO.



LEFT PANEL



RIGHT PANEL

③ MATERAIL : 2mm GS
QTY: 01 NO.

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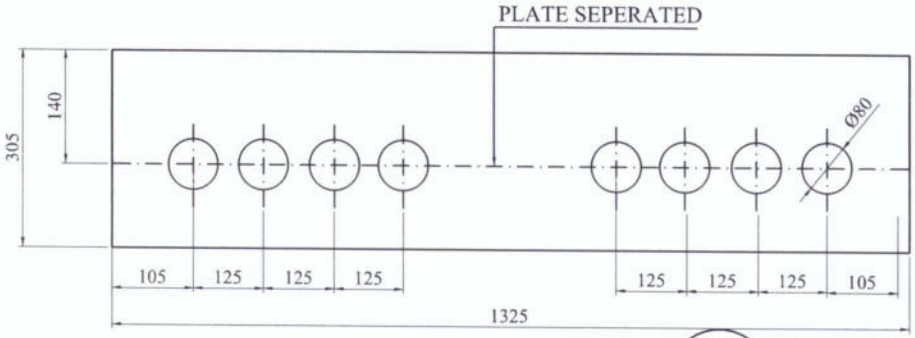
Chairman Dist. Coordination Committee
23/01/2024

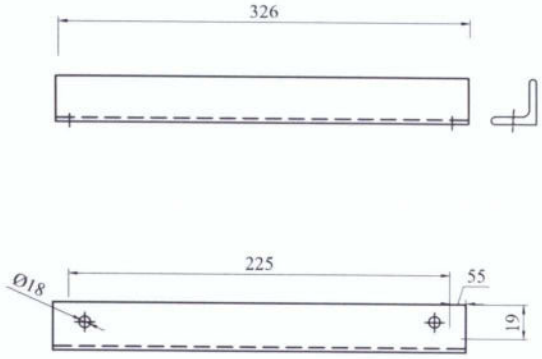
ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	8 WAY FEEDER PILLAR SHELL ARRANGEMENT	DRAWN : AMILA / COPIED : HARSHA
	Extract of:- FEEDER PILLAR SPECIFICATION / APPROVED BY	DATE : OCT. 2023
		DRG. NO : DS&S/2023/048/C5
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/64-5



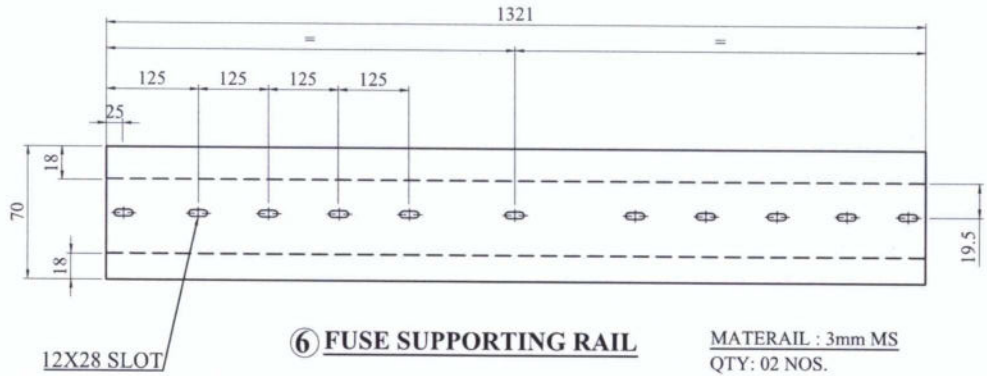
13 BOTTOM PLATE

MATERAIL : 3mm MS
QTY: 0 NO



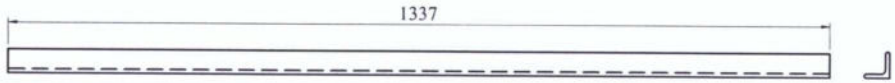
12 PROVISION FOR MOUNTING

MATERAIL : 38x38x6 A.I
QTY: 01 NO.



6 FUSE SUPPORTING RAIL

MATERAIL : 3mm MS
QTY: 02 NOS.



9 CABLE CLAMP SUPPORT

MATERAIL : 38x38x6 A.I
QTY: 01 NO.

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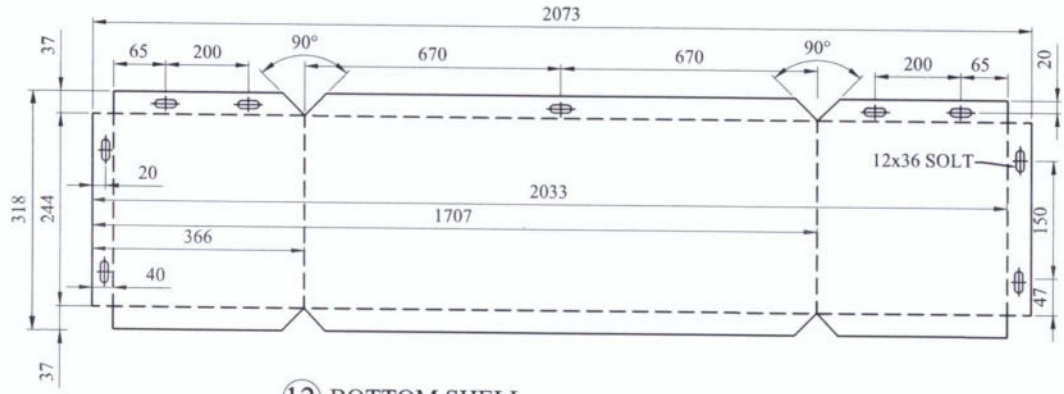
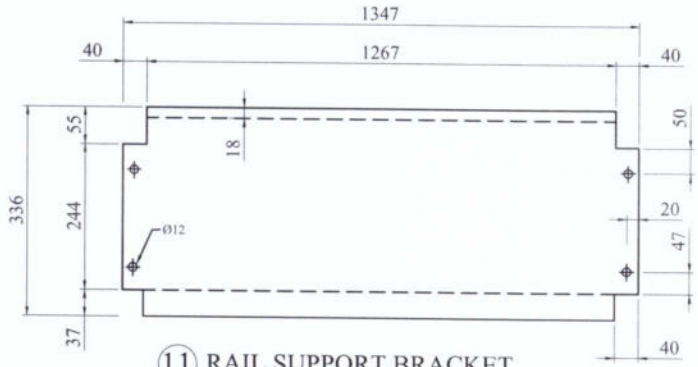
23/01/2024
Chairman Dist. Coordination Committee

ALL DIMMENSIONS ARE IN MILLIMETRES

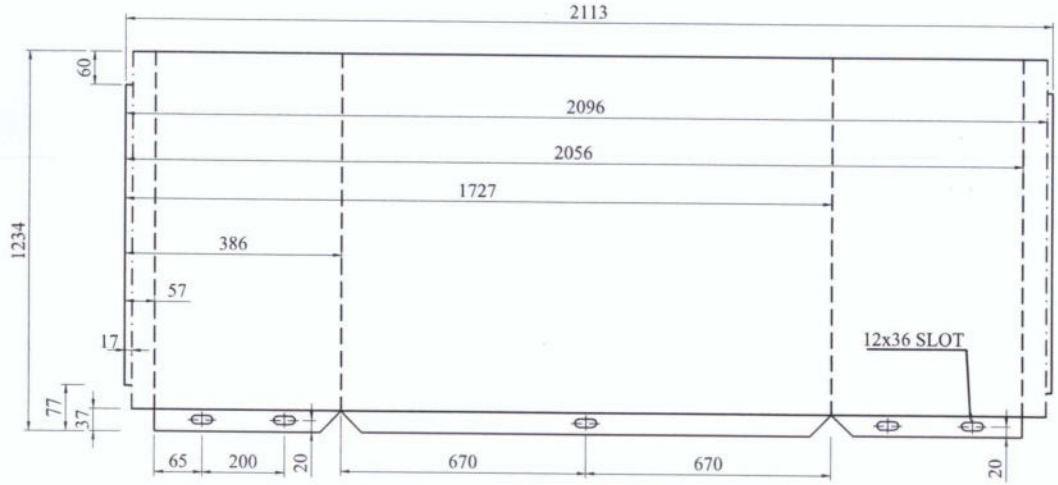
CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	8 WAY FEEDER PILLAR SHELL ARRANGEMENT	DRAWN : AMILA / COPIED : HARSHA
	Extract of:- FEEDER PILLAR SPECIFICATION / APPROVED BY	DATE : OCT. 2023
		DRG. NO : DS&S/2023/048/C6
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/64-6

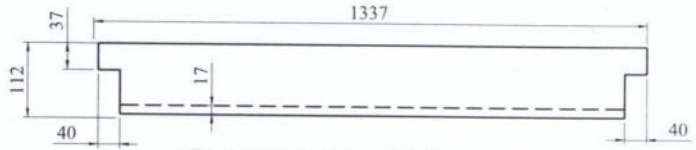


(12) BOTTOM SHELL
MATERAIL: 3mm MS
QTY : 01 NO.



(11) RAIL SUPPORT BRACKET
MATERAIL: 3mm MS
QTY : 01 NO.





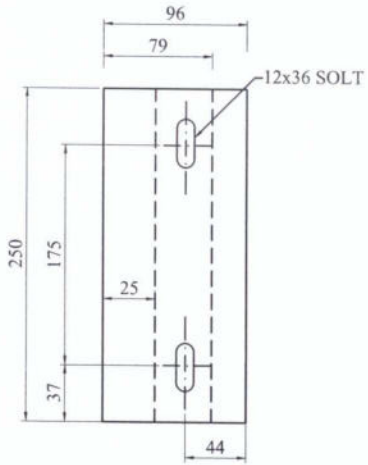
(4) TOP FRONT PLATE
MATERAIL: 3mm MS
QTY : 01 NO.

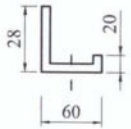
(15) BOTTOM PLATE
MATERAIL: 3mm MS
QTY : 01 NO.

CEB Approved Specification
23/9/2024
Chairman Dist. Coordination Committee

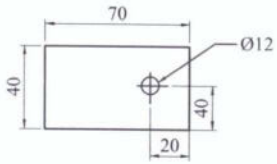
ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	8WAY FEEDER PILLAR SHELL ARRANGEMENT	DRAWN : MADARA COPIED : HARSHA
		DATE : OCT. 2023
DISTRIBUTION COORDINATION BRANCH	Extract of:- FEEDER PILLAR SPECIFICATION / APPROVED BY CHAIRMAN, SPECIFICATION COMMITTEE	DRG. NO : DS&S/2023/048/C7
		SOURCE : DGM(CC)/DO/CO/12/64-7

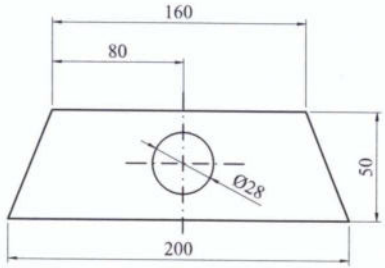




⑦ MATERAIL : 3mm MS
QTY: 02 NO.

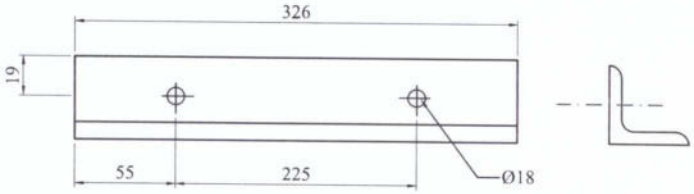


⑦ MATERAIL : 3mm MS
QTY: 02 NO.

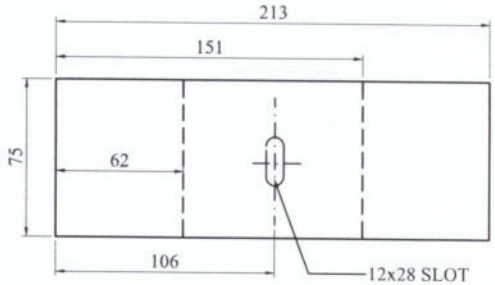


② MATERAIL : 3mm MS
QTY: 02 NO.

LIFTING LUG



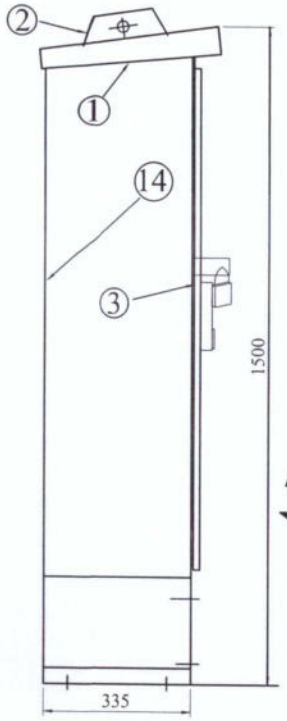
⑪ MATERAIL : 38x38x6 A.I
QTY: 02 NO.



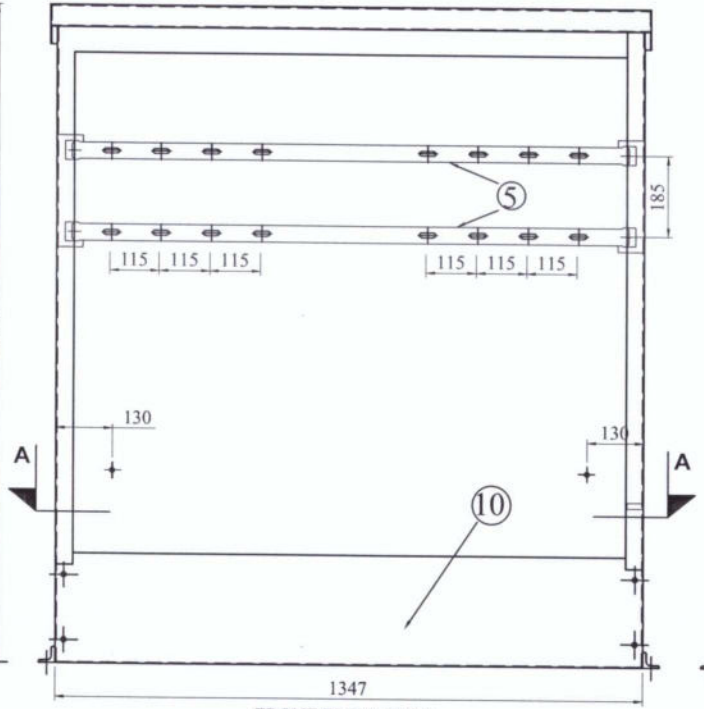
⑤ MATERAIL : 3 MS
QTY: 02 NO.

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION STANDARDS & SPECIFICATION	SCALE : NOT TO SCALE
	8 WAY FEEDER PILLAR FABRICATION OF COMMON ITEM	DRAWN : MADARA COPIED : HARSHA
		DATE : OCT. 2023
	Extract of:- FEEDER PILLAR SPECIFICATION APPROVED BY	DRG. NO : DS&S/2023/048/C8
DISTRIBUTION COORDINATION BRANCH	CHAIRMAN, SPECIFICATION COMMITTEE	SOURCE : DGM(CC)/DO/CO/12/64-8

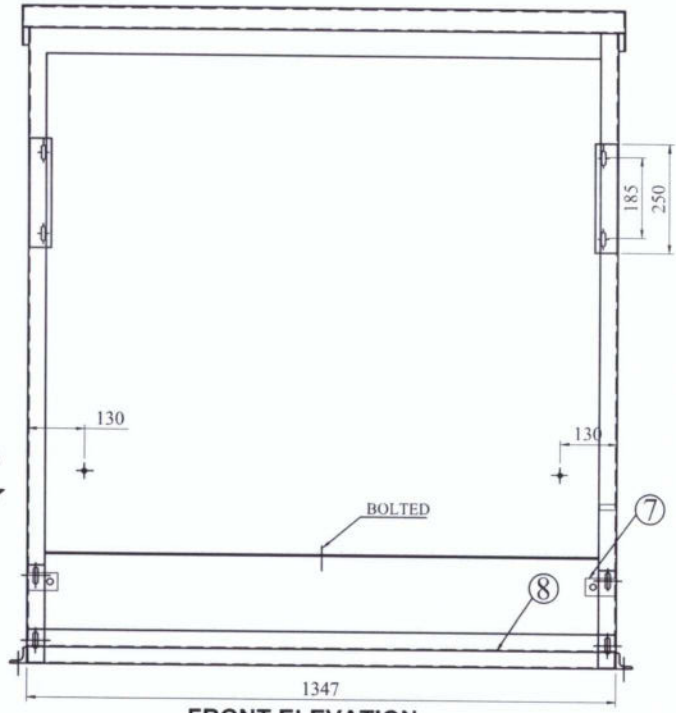


END ELEVATION

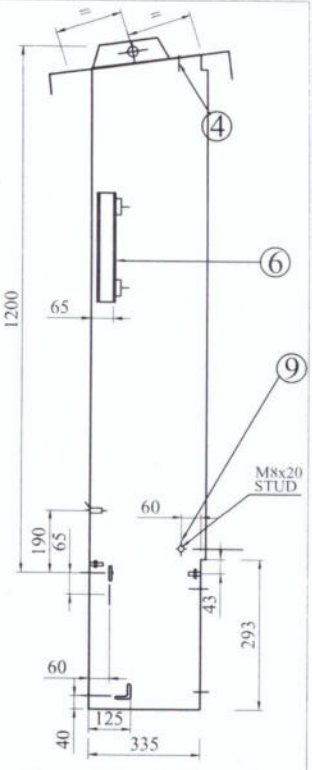


FRONT ELEVATION

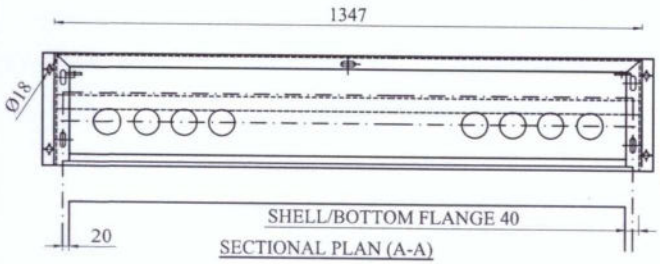
(WITHOUT DOOR & ROOF)



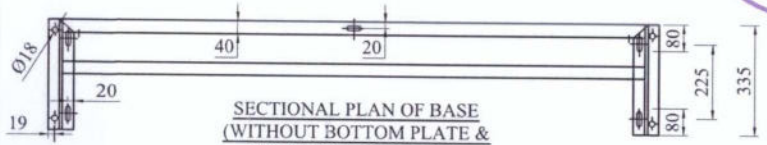
FRONT ELEVATION (WITHOUT FRONT TOP PLATE, BOTTOM FRONT PLATE & DOOR)



SEC.END ELEVATION



SECTIONAL PLAN (A-A)



SECTIONAL PLAN OF BASE
(WITHOUT BOTTOM PLATE &
FRONT BOTTOM PLATE)

NO:	DESCRIPTION	NO:	DESCRIPTION
1	ROOF -3mm MS	8	CABLE CLAMP SUPPORT-38x38x6 Al
2	LIFTING LUG - 3mm MS	9	M8x25 STUD FOR SHELL+DOOR EARTHING
3	DOOR - 2mm GI	10	RAIL SUPPORT BRACKET-3mm MS
4	TOP FRONT PLATE - 3mm MS	11	PROVISION FOR MOUNTINGS-38x38x6 Al
5	FUSE SUPPORTING RAIL - 3mm MS	12	BOTTOM SHELL-3mm MS
6	ENDS RAIL SUPPORT BRACKET-3mm MS	13	BOTTOM SHELL - 3mm MS
7	EARTHING SUPPORT BRACKET-3mm MS	14	SHELL - 3mm MS

CEB Approved Specification
23/01/2024
Chairman Dist. Coordination Committee

ALL DIMMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION STANDARDS & SPECIFICATION

8 WAY FEEDER PILLAR

FABRICATION ARRANGEMENT

Extract of:-
FEEDER PILLAR SPECIFICATION

APPROVED BY

CHAIRMAN,
SPECIFICATION COMMITTEE

SCALE : NOT TO SCALE

DRAWN : MADARA | COPIED : HARSHA

DATE : OCT. 2023

DRG. NO : DS&S/2023/048/C9

SOURCE : DGM(CC)/DO/CO/12/64-9

Annex- D

SCHEDULE OF TECHNICAL REQUIREMENTS AND GURANTEED TECHNICAL PARTICULARS

(Following Information shall be furnished with the offer for each rating)

		Specified	Shell	Fuse switch Bay
01	Name of Manufacturer			
02	Country of Manufacture			
03	Model offered			
04	Whether test certificates as per Clause 6.0 furnished	Yes/No		
05	Nominal Voltage Phase to phase	400V		
06	AC voltage withstand for 1 minute			
07	Impulse withstand voltage (standard Impulse)			
08	Maximum operating voltage	440V		
09	Sustainable maximum system voltage (short time)			
10	Protection class	IP 4X		
11	Bus bar clearance (vertical)			
12	Bus bar material			
13	Bus bar dimensions			
14	Bus bar leads material			
15	Maximum fuse size			
16	Installed height from base			
17	Width			
18	Length			
19	Thickness of sheets used for housing			
20	Material of sheet used for housing	Steel/Fiberglass		
21	Flame Resistance	UL 94V-0		

.....
Signature of the Manufacturer and seal

.....
Date

I/We certify that the above data are true and correct

.....
Signature of the Bidder and seal

CEB Approved Specification
29/01/2024
Chairman Dist. Coordination Committee

.....
Date

Annex – E

Non-Compliance Schedule

On this schedule the bidder shall provide a list of non-compliances with this specification, documenting the effects that such non-compliance is likely to have on the equipment life and operating characteristics. Each non-compliance shall be referred to the relevant specification clause.

Clause No.	Non-Compliance

.....
Signature of the Manufacturer

.....
Date

I/We certify that the above data are true and correct

.....
Signature of the Bidder and seal

.....
Date

CEB Approved Specification
23/01/2024
Chairman Dist. Coordination Committee